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The World Bank

Report No: ICR0000480

IMPLEMENTATION COMPLETION AND RESULTS REPORT
(AUSL-23612 IBRD-44620 IDA-32010 JPN-26233 JPN-53812)

ON A

LOAN/CREDIT

IN THE AMOUNT OF SDR 46.8 MILLION
(US\$65.0 MILLION EQUIVALENT)

TO THE

PEOPLE'S REPUBLIC OF CHINA

FOR A

HEALTH NINE PROJECT

April 30, 2009

Human Development Sector Unit
China Country Management Office
East Asia and Pacific Region

CURRENCY EQUIVALENTS

(Exchange Rate Effective December 2008)

Currency Unit = Yuan

Y 1.00 = US\$0.15

US\$1.00 = Y6.85

FISCAL YEAR

January 1 to December 31

ABBREVIATIONS AND ACRONYMS

AIDS	Acquired Immune Deficiency Syndrome	M&E	Monitoring and Evaluation
ALT	Alanine Aminotransferase	MA	Medical Assistance
AusAID	Australian Agency for International Development	MCH	Maternal and Child Health
BBI	Blood-borne Infections	MDG	Millennium Development Goals
BOH	Bureau of Health	MFA	Medical Financial Assistance
CAS	Country Assistance Strategy	MIS	Management Information System
CPS	Country Partnership Strategy	MMR	Maternal Mortality Rate
CDC	Center for Disease Control	MOH	Ministry of Health
CMS	Cooperative Medical System	MSM	Men who have Sex with Men
CSW	Commercial Sex Worker	MTR	Mid-term Review
DFID	U.K. Department for International Development	NARL	National AIDS Reference Laboratory
ECD	Early Childhood Development	NCMS	New Cooperative Medical Service
EPI	Expanded Program of Immunization	NGO	Nongovernmental Organization
FLO	Foreign Loan Office	NGU	Nongonococcal Urethritis
GFATM	Global Fund for AIDS, Tuberculosis, and Malaria	PAD	Project Appraisal Document
GOC	Government of China	PDO	Project Development Objective
HBV	Hepatitis B Virus	PMO	Project management office
HCV	Hepatitis C Virus	STD	Sexually Transmitted Disease
HIV	Human Immunodeficiency Virus	TTL	Task Team Leader
IDU	Intravenous Drug User	U5	Under five years of age
IEC	Information, Education and Communication	UNAIDS	Joint United Nations Programme on HIV/AIDS
IMR	Infant Mortality Rate	VCT	Voluntary Counseling and Testing
JSDF	Japanese Social Development Fund	VUBD	Voluntary Unpaid Blood Donor / Donation
KPI	Key Performance Indicator	WHO	World Health Organization

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Country Director:	David R. Dollar, EACCF
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CHINA

HEALTH NINE PROJECT

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MAP IBRD 30065	

A. Basic Information			
Country:	China	Project Name:	China Health Nine Project
Project ID:	P036953	L/C/TF Number(s):	IBRD-44620,IDA-32010,TF-23612,TF-26233,TF-53812
ICR Date:	04/30/2009	ICR Type:	Core ICR
Lending Instrument:	SIL	Borrower:	PRC
Original Total Commitment:	USD 60.0M	Disbursed Amount:	USD 61.8M
Environmental Category: C			
Implementing Agencies: Ministry of Health			
Cofinanciers and Other External Partners: Australian Agency for International Development (AusAID) Government of Japan			

B. Key Dates				
Process	Date	Process	Original Date	Revised / Actual Date(s)
Concept Review:	02/05/1998	Effectiveness:		01/24/2000
Appraisal:	12/01/1998	Restructuring(s):		
Approval:	05/04/1999	Mid-term Review:		04/09/2004
		Closing:	06/30/2006	06/30/2008

C. Ratings Summary	
C.1 Performance Rating by ICR	
Outcomes:	Satisfactory
Risk to Development Outcome:	Low or Negligible
Bank Performance:	Satisfactory
Borrower Performance:	Satisfactory

C.2 Detailed Ratings of Bank and Borrower Performance (by ICR)			
Bank	Ratings	Borrower	Ratings
Quality at Entry:	Satisfactory	Government:	Satisfactory
Quality of Supervision:	Moderately Satisfactory	Implementing Agency/Agencies:	Moderately Satisfactory
Overall Bank Performance:	Satisfactory	Overall Borrower Performance:	Satisfactory

C.3 Quality at Entry and Implementation Performance Indicators			
Implementation Performance	Indicators	QAG Assessments (if any)	Rating
Potential Problem Project at any time (Yes/No):	No	Quality at Entry (QEA):	None
Problem Project at any time (Yes/No):	No	Quality of Supervision (QSA):	None
DO rating before Closing/Inactive status:	Satisfactory		

D. Sector and Theme Codes		
	Original	Actual
Sector Code (as % of total Bank financing)		
Health	94	94
Sub-national government administration	6	6
Theme Code (Primary/Secondary)		
Child health	Primary	Primary
HIV/AIDS	Primary	Primary
Health system performance	Secondary	Secondary
Participation and civic engagement	Secondary	Secondary
Population and reproductive health	Secondary	Secondary

E. Bank Staff		
Positions	At ICR	At Approval
Vice President:	James W. Adams	Jean-Michel Severino
Country Director:	David R. Dollar	Yukon Huang
Sector Manager:	John C. Langenbrunner	Maureen Law
Project Team Leader:	Magnus Lindelow	Jagadish P. Upadhyay
ICR Team Leader:	Magnus Lindelow	
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F. Results Framework Analysis

Project Development Objectives (from Project Appraisal Document)

(1) Reducing maternal and child mortality and morbidity and improving child survival and development in the poorest areas of five provinces of China; and

(2) Prevent and control morbidity and mortality due to the human immunodeficiency virus (HIV), acquired immune deficiency syndrome (AIDS), and sexually transmitted

diseases (STDs) by implementing comprehensive programs at the provincial levels, and by building technical capacity at the Central level.

(3) Reduce the transmission of blood borne infections by assuring a safe and adequate blood supply with improved transfusion practices.

Revised Project Development Objectives (as approved by original approving authority)

n.a

(a) PDO Indicator(s)

Indicator	Baseline Value	Original Target Values (from approval documents)	Formally Revised Target Values	Actual Value Achieved at Completion or Target Years
Indicator 1 :	Reduced maternal mortality			
Value quantitative or Qualitative)	159.3/100000			45.1/100000
Date achieved	01/01/2001			12/31/2007
Comments (incl. % achievement)				
Indicator 2 :	Reduce infant mortality			
Value quantitative or Qualitative)	67.9/1000			12.5/1000
Date achieved	01/01/2001			12/31/2007
Comments (incl. % achievement)				
Indicator 3 :	Reduce <5 child mortality			
Value quantitative or Qualitative)	80.7/1000			15.8/1000
Date achieved	01/01/2001			12/31/2007
Comments (incl. % achievement)				
Indicator 4 :	HIV Prevalence among ANC attendees			
Value quantitative or Qualitative)	Fujian 0.04% (2003) Guangxi 0 Shanxi 0 Xinjiang 0.26%			Fujian 0.01% (2007) Guangxi 0.31% Shanxi 0 Xinjiang 0.87%
Date achieved	01/01/2001			06/30/2008
Comments (incl. % achievement)				

achievement)				
Indicator 5 :	HIV Prevalence among Drug Users			
Value (quantitative or Qualitative)	Fujian: 0.003 Guangxi: 0.0018 Shanxi:0.0124 Xinjiang: N/A			Fujian: 0.0017 (2007) Guangxi: 0.00155 Shanxi:0.0068 Xinjiang: N/A
Date achieved	01/01/2001			06/30/2008
Comments (incl. % achievement)				

(b) Intermediate Outcome Indicator(s)

Indicator	Baseline Value	Original Target Values (from approval documents)	Formally Revised Target Values	Actual Value Achieved at Completion or Target Years
Indicator 1 :	MCH Component: #(%) pregnant women with 5 or more ANC visits			
Value (quantitative or Qualitative)	16%			75.8%
Date achieved	01/01/2001			12/31/2007
Comments (incl. % achievement)				
Indicator 2 :	MCH Component: % of hospital delivery rate			
Value (quantitative or Qualitative)	30.6%			86.2%
Date achieved	01/01/2001			12/31/2007
Comments (incl. % achievement)				
Indicator 3 :	HIV/AIDS and STD Component: # of sentinel sites consistently conducting surveillance surveys (annually)			
Value (quantitative or Qualitative)	16			
Date achieved	01/01/2001			
Comments (incl. % achievement)	Dropped, due to lack of sensitivity			
Indicator 4 :	HIV/AIDS and STD Components: # of confirmed HIV positive			

Value (quantitative or Qualitative)	Fujian 57 Guangxi 2 Shanxi 24 Xinjiang 1109			Fujian 283 (2007) Guangxi 1445 Shanxi 229 Xinjiang 2326
Date achieved	01/01/2001			06/30/2008
Comments (incl. % achievement)				
Indicator 5 :	condom use in the last sex among CSWs			
Value (quantitative or Qualitative)	Fujian: 33.5%-52.3% Guangxi:59.4% (2002) Shanxi: 84.6% (2004) Xinjiang: 86.1% (2001)			Fujian 74.3% Guangxi (vulnerable group) 46.6% Shanxi (vulnerable group) 83.1% Xinjiang 92.4% (2007)
Date achieved	02/01/2001			06/30/2008
Comments (incl. % achievement)				
Indicator 6 :	Needle sharing among IDU			
Value (quantitative or Qualitative)	Fujian: 11% Guangxi: 59.5% Shanxi:25.8% (2004) Xinjiang:85.1% (2002)			Fujian 22% (2007) Guangxi 41.9% Shanxi 23.8% Xinjiang 42.2%
Date achieved	01/01/2001			06/30/2008
Comments (incl. % achievement)				

G. Ratings of Project Performance in ISRs

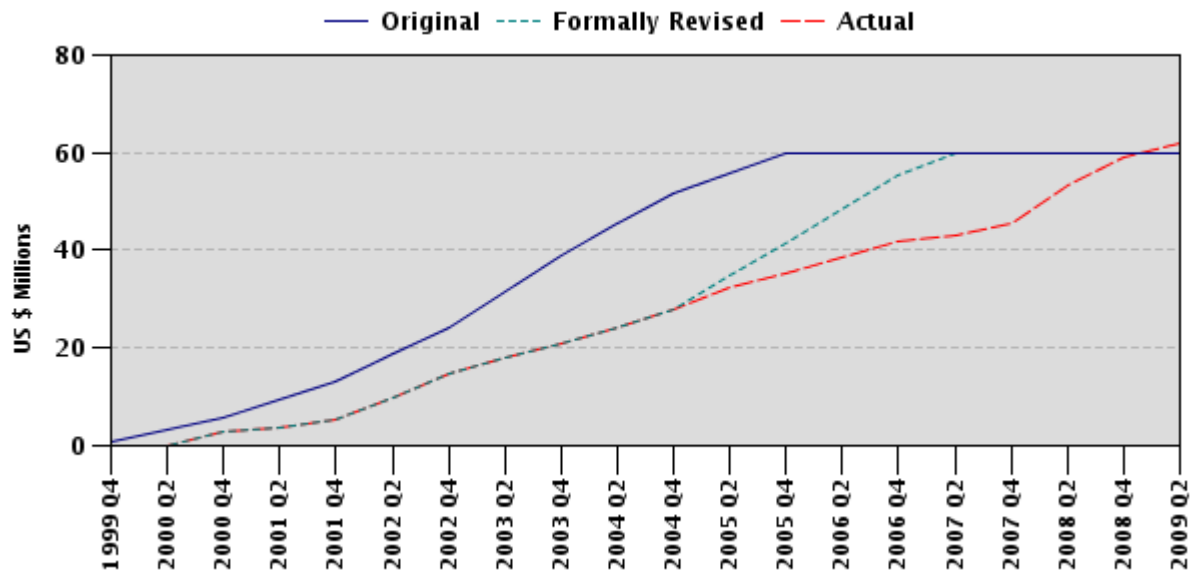
No.	Date ISR Archived	DO	IP	Actual Disbursements (USD millions)
1	06/22/1999	Satisfactory	Satisfactory	0.00
2	12/20/1999	Satisfactory	Satisfactory	0.00
3	02/08/2000	Satisfactory	Satisfactory	0.34
4	06/12/2000	Satisfactory	Satisfactory	2.98
5	12/07/2000	Satisfactory	Satisfactory	3.59
6	06/07/2001	Satisfactory	Satisfactory	4.19
7	10/10/2001	Satisfactory	Satisfactory	5.62
8	04/30/2002	Satisfactory	Satisfactory	12.71
9	06/24/2002	Satisfactory	Satisfactory	14.61
10	12/09/2002	Satisfactory	Satisfactory	17.37

11	06/02/2003	Satisfactory	Satisfactory	19.57
12	12/08/2003	Satisfactory	Satisfactory	23.47
13	06/23/2004	Satisfactory	Satisfactory	27.96
14	12/29/2004	Satisfactory	Satisfactory	32.61
15	06/07/2005	Satisfactory	Satisfactory	35.12
16	03/27/2006	Satisfactory	Satisfactory	39.60
17	04/12/2007	Satisfactory	Satisfactory	45.16
18	03/10/2008	Satisfactory	Satisfactory	56.02

H. Restructuring (if any)

Not Applicable

I. Disbursement Profile



1. Project Context, Development Objectives, and Design

1.1 Context at Appraisal

China's significant health gains during the 1960s and 1970s earned worldwide recognition. Following onset of economic reforms in the 1980s, however, the primary health care system was weakened, reducing access to both curative and preventive services. With health care increasingly paid out-of-pocket, health inequities rose. Steps were taken in the 1990s to improve access to primary care, including the attempt to reintroduce the rural cooperative medical system (CMS). The "contract responsibility system" was also devised, primarily focusing on the Expanded Program of Immunization (EPI) and antenatal care. Policies and regulations were adopted to protect the health and rights of women and children, and the Ministry of Health (MOH) worked to reestablish the three-tier Maternal and Child Health (MCH) network. However, these efforts were hindered by inadequacies in MCH worker education, training, and skill acquisition at the township and village level. Resource and infrastructure use was inefficient and management capacity was underdeveloped. Financial barriers remained a persistent impediment to basic MCH services.

In 1998, the Government of China (GOC) restructured the Department of Maternal and Children's Health by putting it into the same department as community health to build more integrated urban and rural primary care systems. The basic policy focus stayed unchanged—to protect the health of mothers and children, particularly to reduce maternal and infant mortality. While national maternal and child health (MCH) improved over time, the rural-urban divide and the gap between richer and poorer provinces remained marked as seen in the incidence of malnutrition, iron deficiency anemia, rickets, and vitamin A deficiency in the under-five (U5) population of poor areas.

Meanwhile, the rapid economic expansion, greater openness, and increased population mobility were contributing to new health problems, including the reemergence of sexually transmitted diseases (STDs)¹ and the appearance of human immunodeficiency virus/acquired immune deficiency syndrome (HIV/AIDS). STD case levels also increased in the mid-1990s as poor-quality STD programs, including preventive and curative services, were unable to stem transmission. Gonorrhea and syphilis predominate among reported STDs, but deficiencies in surveillance systems mean the real case total of all STD types is likely 5–10 times higher than the recorded numbers. HIV/AIDS was first reported in China in 1985. Since then transmission has occurred in three stages: (a) 1985–89, when infection was sporadic and imported; (b) 1989–93, when transmission remained limited but was slowly increasing; and (c) post-1994, when case numbers and geographical spread increased more sharply, predominantly via needle-injecting drug users, but with sexual transmission becoming important, and some cases attributable to professional blood donors, mother-to-infant transmission, and men having sex with men (MSM).

¹ Following a government crackdown, few STD cases were reported between early 1960 and mid-1970. Case levels jumped in the late 1970s.

Chinese policy and regulations on HIV/AIDS began to shift in the early 1990s. The Chinese Association of STD & AIDS Prevention and Control was set up in 1993, and a cornerstone of the new strategy was “multi-sectoral cooperation and all society participation” (State Council 1995 release of “Opinion of Work on AIDS Prevention and Control”). Mid- and long-term national plans for AIDS prevention and control (1998–2010) were drafted through collaboration of seven national ministries and approved by the State Council in May 1998. Despite these developments, numerous challenges remained, including: (a) limited government awareness of the extent of the problem, (b) lack of prevention and control targeted at high-risk groups, (c) relatively weak policy and regulatory mechanisms, (d) lack of support for and increased stigma of infected persons, (e) inadequate dissemination of successful international intervention measures being trialed in country, (f) weak public media, limited public education among youth, and inadequate nongovernmental organization (NGO) involvement, (g) lack of human resources, and (h) lack of technical guidelines for intervention.

Rationale for World Bank assistance

The Health IX project responded to both of these situations, pursuing objectives identified in the February 1997 Country Assistance Strategy (CAS). In particular, it targeted: (a) methods for improving MCH health and disease prevention in poor areas, and (b) multisectoral approaches for prevention and control of HIV/AIDS and STDs in high-risk areas.

The project design of both components built on the Bank’s longstanding partnership with China in the health sector. The Health VI project (Comprehensive Maternal and Child Health) had demonstrated gains in decreasing financial barriers to care for poor women and improving the quality of clinical care, particularly in the rural medical system. Gains in improving institutional infrastructure, health sector policy development, and human resource capacity facilitated Health IX (MCH) design and implementation to extend what had been learned in Health VI to 113 additional low-income counties in five relatively low-income provinces/autonomous regions (51 million persons) where mortality rates were high in 1996 and 1997 as indicated in the project appraisal document: up to 463 per 100,000 for maternal death (compared to a national rate of 61.9) and up to 84 per 1,000 for infants (compared to a national rate of 36.4).

The second component drew on lessons from the Health VII project (health promotion component), which was the first donor-supported effort to address HIV/AIDS and STDs. While China was still in the early stages of grappling with a potential public health crisis,² Health VII (Health Promotion) did provide a framework for developing modern public health programs, policy and institutional capacity, skilled human resources,

² The Health IX project was designed when recognition was growing that HIV transmission was resulting from blood donation malpractice in Henan and elsewhere, a rampant STI epidemic was occurring in the coastal provinces, and HIV was breaking out among drug users in Xinjiang and other provinces. Previous HIV interventions had been confined mostly within health sectors, and policies did not support interventions among high-risk groups.

surveillance systems, and community-based interventions that could be tapped in strengthening HIV/AIDS and STD prevention and control. Health VII spotlighted the need to build capacity in epidemic areas, mobilize full-scale multisectoral involvement, coordinate large-scale information, education, and communication (IEC) campaigns, and finally, include private practitioner and NGO participation. These lessons were applied through a series of innovative Health 9 programs targeting 31 prefectures/cities in 59 counties of four provinces that were considered to be high-risk areas (94 million persons).

1.2 Original Project Development Objectives (PDOs) and Key Performance Indicators

The Health IX project is divided into two distinct primary components, with differing development objectives, target populations, and activities. In addition, the project has a third component focused on project coordination and support.

- *Component 1*—Improved Maternal Health and Child Development—would reduce maternal and child mortality and morbidity and improve child survival and development in five relatively poor provinces/autonomous regions: Guizhou, Hainan, Hunan, Jilin, and Xinjiang.
- *Component 2*—Improved Prevention and Control of Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome and Sexually Transmitted Diseases (HIV/AIDS and STDs) and Other Blood-Borne Infections—would prevent and control these diseases by implementing comprehensive and multisectoral public health programs at the provincial level, and by building technical capacity at the central level. Provincial activities would be implemented in four high-epidemic provinces/autonomous regions: Fujian, Guangxi, Shanxi, and Xinjiang.

The following table summarizes the key performance indicators (KPIs) as outlined in Annex 1 of the PAD. Note that component 2 is divided into two parts, inclusive of improved blood transfusion practices becoming a separate entity during implementation and consistent with the results analyses.

PDO	KPI
<p>The project will assist the government to:</p> <p>(1) Reduce maternal and child mortality and morbidity and improve child survival and development in the poorest areas of China</p> <p>(2) Prevent and control morbidity and mortality due to HIV/AIDS and STDs, by building technical capacity at the Central level and implementing comprehensive programs at the provincial level.</p>	<ul style="list-style-type: none"> • Improved service quality and access to poor families. • Reduced maternal and child mortality and morbidity. • HIV seroprevalence • STD prevalence
<p>Component 1 <i>Reduce maternal and child mortality and morbidity and improve child survival and development in the five project provinces/autonomous regions.</i></p>	<ul style="list-style-type: none"> • Reduced maternal and child and infant mortality and morbidity • Increased level of maternal care • Better sick-child management • Better well-child and systemic newborn care • Better family and community participation, education, and counseling • Better management of MCH services • Increased health-worker training • Improved access to MCH care services, especially for the poor
<p>Component 2 (A) Prevent and control morbidity and mortality due to HIV/AIDS and STDs by implementing comprehensive and multisectoral public health programs at the provincial levels, and by building technical capacity at the central level in the four project provinces/autonomous regions.</p>	<ul style="list-style-type: none"> • Reduced HIV seroprevalence • Reduced STD prevalence • Increased policy environment supportive of HIV prevention and care • Improved HIV/STD interventions and support • Improved HIV/STD surveillance systems
<p>(B) Reduce the transmission of blood-borne infections by assuring a safe and adequate blood supply with improved transfusion practices in the four project provinces/autonomous regions.</p>	<ul style="list-style-type: none"> • Increased voluntary blood contributions, quality assurance of testing, and transfusion practices. • Reduced transmission risks of HIV, Hepatitis B, and Hepatitis C

<p>Component 3 <i>Provide project coordination and support.</i></p>	<ul style="list-style-type: none"> • Provincial and central structure for planning budgeting, management, and technical supervision • Improved provincial-level capacity for technical support • Improved central-level technical support, policy development, and national dissemination • Improved capacity of National AIDS Reference Laboratory to provide training, technical support, and quality assurance for HIV testing and surveillance
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A number of secondary objectives and performance indicators are institutional and not detailed in the PAD, but are deemed important for results analysis. These include the following, by component/subcomponent:

- *Component 1—MCH*
 - (i) Increased public resource allocation for basic preventative health services
 - (ii) Introduction of an improved health worker training program
 - (iii) Improving management practices in the system of maternal and neonatal care
- *Component 2(A)—HIV/AIDS and STD*
 - (i) Strengthened central and provincial government capacity to plan and implement effective programs to prevent and control these diseases
 - (ii) Development of improved testing methods and procedures by the National AIDS Reference Laboratory to improve HIV diagnostic accuracy, and train provincial and local personnel in implementing the regimen
- *Component 2(B)—Blood transfusion management*
 - (i) Development of effective national policies to improve the collection, quality, and use of blood products
 - (ii) Strengthened provincial and local efforts to rationalize blood product use in health service provision
- *Component 3—Combined coordination and support*
 - (i) Introduction of participatory methodology for the development of health education materials, counseling, and communication strategies, which will also strengthen program evaluation.

1.3 Revised PDO (as approved by original approving authority) and Key Indicators, and reasons/justification

Development objectives and key indicators were not revised. However, in the later stages of the project, the monitoring framework received increased attention. A systematic review resulted in modification of terminology for several indicators, a decision to drop a

number of indicators from the monitoring framework (on account of the fact that no data are available, that the interpretation of the indicator is unclear, or that the indicator does not meaningfully capture (or distinguish) project outcome vs. performance); and a proposal to include some new indicators to the monitoring framework. These changes were documented in the mission documents.

1.4 Main Beneficiaries

The MCH component was designed to annually provide about one million mothers and their newborns from 113 of China's poorest counties, in five relatively poor provinces/autonomous region selected for the project based on MCH indicators and poverty indexes, with greater access to higher-quality health services that had been field-tested and shown to help reduce MMR and IMR elsewhere in the country. Locally administered poverty relief funds would reduce medical costs for MCH-related services (especially hospital delivery care), particularly benefiting the most impoverished families.

Direct beneficiaries of the HIV/AIDS and STD component included those at highest risk of contracting these diseases or other blood-borne infections (BBIs) in the 31 prefectures covered by this part of the project. Other beneficiaries included individuals, households, and families directly affected by infection. Those especially susceptible to infection include individuals who engage in high-risk behavior such as intravenous drug users (IDUs), or commercial sex workers (CSWs) and their clients. The many internal migrants within China are also vulnerable.³ Improved blood supply management would reduce the risk of infections from diseases such as hepatitis and HIV, benefiting those in the project area who need blood products for medical treatment. Among those beneficiaries are women delivering children since the greatest cause of maternal mortality and morbidity is postpartum hemorrhage.

Effective dissemination of successful project strategies and practices was expected to strengthen the capacity of the central government to oversee the prevention and control of these diseases and to maintain MCH elsewhere, benefiting the whole country.

1.5 Original Components

The two primary Health IX components—MCH, and HIV/AIDS and STD—accessed a total IDA credit of SDR 36.8 million (US\$50 million) and an IBRD loan of US\$10 million. The MCH component (IDA US\$35 million) targeted 113 counties in Hunan, Xinjiang, Hainan, Guizhou, and Jilin provinces/autonomous region. The HIV/AIDS and STD component (IDA US\$15 million and IBRD US\$10 million) covered 35 prefectures/cities in 55 counties of Shanxi, Fujian, Guangxi, and Xinjiang provinces/autonomous regions. There is also a third component which is Project

³ Prefectures in the project provinces of Fujian, Guangxi, and Xinjiang have many such migrants.

Coordination and Support (totally US\$6 million, subtracted from the two primary components)

Component 1 (MCH) consisted of six subcomponents:

- 1A—*Improved Quality of Basic Maternal Health and Child Development Care Services*, including: (i) a basic mother and child health package; (ii) improved maternal care through systematic prenatal care, appropriate obstetric care, labor and delivery care, and effective management of high-risk pregnancies; (iii) integrated sick child care through effective management of childhood illness, malnutrition, and newborn care; and (iv) improved well-child and systematic newborn care through nutrition interventions and preventive care.
- 1B—*Improved Family and Community Participation and Health Education*, including: (i) premarital counseling services; (ii) action-oriented health education materials for families; (iii) prevention and treatment of priority diseases; (iv) promotion and monitoring of nutrition; (v) parenting skills to foster children's psychosocial development; and (vi) design and production of child development and maternal health information, education, and communication materials.
- 1C—*Improved Management of MCH Services, including Management Information Systems (MISs)*, involving: (i) improved planning and coordination of MCH services; (ii) improved quantity and quality of supervisory support between levels; (iii) improved function and use of MCH management information and surveillance systems; (iv) management training; and (v) operational research.
- 1D—*Improved Health Worker Training* through a comprehensive program to support of the development of trainers and training materials.
- 1E—*Improved Access to MCH Care Services* through development and implementation of a medical financial assistance (MFA) program, including an essential package of services and use of finance mechanisms.

Component 2 (HIV/AIDS and STD) consisted of four subcomponents:

- 2A—*Improved and Expanded Policy Development and Institutional Building*, including: (i) raising awareness and commitment at all levels; (ii) strengthening multisectoral collaboration; (iii) building capacity of public and private sectors and nongovernmental institutions, (iv) integrating programs for HIV/AIDS and STDs and for other blood-borne infections into other health services; and (v) supporting policies on syndromic management.
- 2B—*Improved HIV/AIDS and STD Interventions and Support*, including: (i) innovative and cost-effective programs to prevent and control these diseases; (ii) behavioral changes to reduce risks; (iii) improved STD management; (iv) condom social marketing; and (v) patient care and support.
- 2C—*Improved HIV/AIDS and STD Surveillance System*, including: (i) development and expansion of a surveillance system to monitor epidemic and behavioral trends, influence policy, inform project design, and measure the impact of interventions.

- 2D—*Improved Management of Blood Transfusion Services*, including: (i) transition from a voluntary paid donor blood supply to a quality-assured program of voluntary unpaid blood donations; (ii) quality assurance for blood testing, processing, storage, and delivery; (iii) development, dissemination, and promotion of clinical guidelines for good transfusion practice by clinicians; (iv) training of blood-service and clinical staff; and (v) increased resources to support the voluntary blood donation program, so that these steps not only improve blood product safety to reduce BBIs but also increase supplies for critical blood transfusion for trauma, maternal hemorrhage, and other medical conditions.

Component 3 (Project Coordination and Support) was designed to support the national level to develop and implement policy to do the following:

- Support project planning, supervision, monitoring, and reporting
- Facilitate and provide technical assistance to the provinces/autonomous regions
- Conduct research, targeting MCH financing and service access for poor families
- Extend practices to non-project areas
- Support establishment of a National AIDS Reference Laboratory (NARL).

1.6 Revised Components

No formal revisions were made in project components, although as section 1.2 notes, “blood transfusion management” in Component 2 effectively became a separate component in the supervision arrangements. In addition, a new area of work supporting greater NGO activities for the HIV/AIDS component was opened by funding from the Australian Agency for International Development (AusAID) and the Japanese Social Development Fund (JSDF), and was effectively managed as a distinct subcomponent.

1.7 Other Significant Changes

Additional financing from AusAID (AUD 2,000,000) from July 1, 2000–December 31, 2002, and JSDF (US\$400,000) from July 1, 2000–April 30, 2002, supported NGO capacity building for control and prevention of HIV/AIDS and STDs in all project provinces/autonomous regions covered by Component 2. AusAID’s funding also supported related central and provincial technical assistance. JSDF support was bolstered in June 2005 with a further US\$660,000 for Xinjiang Province only.

Closing date extension

The project was extended to June 30, 2008, two years past the original closing date of June 30, 2006, to sustain implementation momentum and meet project objectives more fully.

2. Key Factors Affecting Implementation and Outcomes

2.1 Project Preparation, Design, and Quality at Entry

Project quality at entry was affected by several factors. Health IX had two distinct tracks, supporting the longstanding MOH priority to improve maternal and child health while also challenging the GOC to respond more comprehensively to the new challenge being posed by HIV/AIDS and the recurrence of STDs. The complexities of managing what amounted to **two distinct projects rather than a single unified project** were built into Health IX from the outset.

As previously noted, the project drew on previous World Bank-funded experiences in China. The MCH component not only transferred what was learned in Health VI to new beneficiaries, **it built on previous experience by introducing innovative elements new to China**, particularly in relation to early childhood development. This was even more apparent in the HIV/AIDS and STD component of the project. While Health VII (health promotion) provided an excellent basis for Health IX project preparation and design, many internationally accepted policy concepts had to be incorporated that were not well understood in China, such as harm minimization from the outset. Even though it represented a significant scaling up of work begun in Health VII, becoming the first comprehensive and then-largest donor-supported HIV project in China, the **project design remained sufficiently broad and flexible to allow for project evolution as prevailing attitudes adapted to the changing nature of the emerging HIV/AIDS epidemic**. Over time, the Chinese government, health system, and society adopted new concepts and practices as they saw the need and became ready to implement them.

The project was built on the foundations of a well-established and trusted relationship between the MOH and its partners. This facilitated negotiations to tackle elements of HIV/AIDS prevention and control that could be perceived as riskier for the Chinese government. Project preparation and appraisal by the World Bank was led and assisted by a senior project officer, supported by a Bank sector specialist and by other technical specialists who were familiar with global developments as well as health sector realities in China (UNAIDS, the World Health Organization, and Family Health International (FHI) provided technical assistance). Similarly, technical input for the MCH component reflected the perspectives of professionals with extensive project experience in China. This team expertise was a positive factor in project preparation, design, and quality at entry.

2.2 Implementation

A number of factors influenced the course of project implementation. They are discussed below in terms of: (a) those outside the government's control; (b) those subject to government control; and (c) those subject to implementation agency control.

Factors outside government control

The impact of SARS in 2003 and Avian Flu in 2004 hindered project supervision and caused some implementation delays due to travel restriction and redeployment of project staff to meet the new emergencies. However, these outbreaks also provided impetus for renewed government commitment to public health investment.

The historical, cultural, and policy environment was both inhibiting and enabling. General attitudes toward high-risk groups for HIV/AIDS may have inhibited health workers' capacity to design and implement outreach interventions targeted at IDUs, CSWs, and MSM based on principles of harm minimization and human rights. Underdevelopment of civil society also meant there were few NGOs ready to enter into a partnership with government in HIV/AIDS prevention and control. As a result, extensive training was required and program activities were slow to start. However, the policy environment changed in 2002, signaling to health organizations and the public alike that a different approach was both accepted and required. By contrast, the predispositions of Chinese health workers meant that project activities that were more technical (for example, blood management) were accepted more easily than less technical ones such as HIV prevention outreach.

At the operational level, the most significant external factor that affected project implementation was the **frequent change of the Bank's task team leader (TTL)**. The first and the last TTLs were seen by the GOC as longstanding. In the critical period following the midterm review, however, the supervision missions had three different TTLs. Chinese project managers believed this contributed to delays, just as their work was gaining momentum and direction, because of the need to bring new Bank personnel up to speed and to adjust to the work styles of the new task team leader.

Factors subject to government control

During the project, **significant economic growth** occurred, which helped raise household income and improve infrastructure for communities. Both would have contributed to better maternal and child health. On the other hand, economic growth in the coastal areas constituted a pull factor for rural migration, creating new vulnerability to HIV/AIDS and STD for migrant workers.

During this period, there were also **significant changes by the GOC in the broader health financing environment** that influenced Health IX project effectiveness. MCH was impacted by the new Reduction and Elimination (R&E) program, HIV was impacted by the new Statute on HIV Prevention and Control, and blood management was impacted by the new National Debt Program. Most significantly for MCH in poor areas, the Medical Assistance (MA) scheme and New Cooperative Medical Service (NCMS) were introduced circa the midterm review.

Beyond these national program developments, the GOC received a **significant growth in international donor assistance for HIV/AIDS prevention and control**. The U.K. Department for International Development (DFID) has had a significant presence with initial projects in Sichuan and Yunnan, and the subsequent CHARTS project that focused

on policy capacity development at the provincial level. The Global Fund for AIDS, Tuberculosis, and Malaria (GFATM) has supported significant scaling up of HIV/AIDS intervention programs across China, in line with new national policy directions. The U.S. Center for Disease Control (CDC), the Clinton Foundation, and AusAID have all had significant projects—with the latter’s project in Xinjiang overlapping, though coordinated with Health IX.

Government restructuring also affected the context and operations of Health IX. Organizational changes within MOH (Basic Health Services was separated from the Medical Administration Department and combined with the MCH Department to form a new department) negatively affected MCH implementation and outcomes for the project in 1998. The development of urban community health services was announced as a new policy priority in 2000. Then with the advent of the NCMS policy initiative in 2003, Basic Health Services was again removed from the combined department to form a new Rural Health Department, leaving MCH with Community Health Services. This central-level reorganization has affected staff continuity and turnover of both the central and provincial MCH services, and financial support by counties. For example, central level restructuring was replicated at provincial level in Xinjiang, resulting in staff turnover and interruptions in attention to and the momentum of Health IX implementation.

Slow mobilization of counterpart funds at the provincial and county levels also negatively affected implementation of both primary project components. The high level of turnover at the provincial level aggravated discontinuities that may have contributed to the lack of knowledge about counterpart funding and led to the periodic loss of local government support for the project. Preparation of the Medical Financial Assistance (MFA) plan, and financing it, contributed to the slow start of the MCH component in particular. The burden for local government in reconciling fiscal decentralization with the on-lending arrangements for World Bank loans can be acute. The poorest counties, which had the greatest need and the least understanding of potential project benefits, found it particularly difficult to mobilize counterpart funds.

Factors subject to implementation agency control

Transfer of knowledge and materials was good. The continuity of national experts from Health VI to the MCH component of Health IX eliminated the need to devise pertinent training materials. Similarly, experts involved in HIV/AIDS work under Health VII were able to transfer their knowledge and experience. MOH technical guidance continuity was also an important enabler for blood management.

Project management by the Foreign Loan Office (FLO) was strong. Experienced FLO project managers provided support for lower administrative levels to establish project management systems and undertake advocacy with local government. The FLO also successfully mobilized 52 NGO-led interventions for HIV/STD, furthering implementation of the HIV/AIDS component. The continuity provided by a project manager who had responsibility for all components during the final years of the project was important for meeting project objectives.

The above successes were achieved despite considerable **financing and management barriers**. Lack of a central funding provision for the MCH component meant that resources had to be clawed back from the provinces/autonomous regions for national level input. Procurement delays, primarily attributable to Chinese procedures but also to the World Bank, hindered implementation as well. Leadership changes in the project leading group at the provincial and county level impacted implementation for both components. In particular, this may have exacerbated the slow start in carrying out the HIV/AIDS and STD component by creating confusion about where to begin, what to do, and how to handle new concepts.

2.3 Monitoring and Evaluation (M&E) Design, Implementation, and Utilization

Several failures in design of monitoring and evaluation of project activities are to be noted. First, there was **a lack of early monitoring and evaluation**. Despite denomination of key performance indicators in the PAD, cursory attention was devoted at the outset to how project effectiveness was to be assessed. A comprehensive framework for monitoring and evaluation was not set up properly until after several supervisory visits and aide memoire recommendations.

Early MCH data collection did not reflect relevant KPIs. Key performance indicators were not part of the routine administrative data collection for the MCH component, so the key staffs were unfamiliar with the system for project and financial data collection. Good data collection producing realistic indicators of implementation results did not occur until midway to late in the project. A baseline survey was undertaken, but was not repeated at the end of the project on the recommendation of the World Bank (alternative data sources were available to assess trends in key indicators; the limited funding available for evaluation were used to support case studies and focused evaluations of specific interventions).

The design of surveillance systems for HIV/STD was inadequate. Surveillance systems for HIV/AIDS were poorly designed to capture the local dynamics of the epidemic and did not coordinate effectively with systems for STD surveillance. Most importantly, all the data collected have not been analyzed and the findings from surveillance have not been sufficiently used for guiding the future interventions among the local high risk groups. Moreover, under-reporting of STIs is significant and prevalent.

There were also several shortcomings in implementation. First, **lower-level MCH data collection was inadequate**. For the MCH component, data collection was less satisfactory at the more grassroots (township and village) than the central level, as expected. Although documentation and data collection at the central level were higher in quality, project development outcomes can not be adequately measured unless adequate records have been kept at the lower levels. Project managers and experts believe that lower-level MCH data prior to 2004 was largely unreliable and was generated only to satisfy the interest of leaders then in charge (this was a country-wide issue at that point, and hence not project-specific). This was not just a issue for data collection of Health IX project, it was the case for the country by then. Since 2004, data quality has improved as a result of supervisory missions and aide memoires.

There was also under-expenditure in operational research (OR). Although OR activities for the MCH component were meant to occur at the provincial level, funding was allocated to counties, probably through poor understanding of the design and the intent. As counties felt incapable of undertaking OR or were unable to identify appropriate expertise elsewhere, under-expenditure for this activity prevailed. OR was particularly neglected in Xinjiang owing to high staff turnover at the county and provincial levels, and loan processing became the predominant focus.

For the HIV/STD component, new **sentinel surveillance sites were slow to be set up**,⁴ mainly due to sluggish procurement. Even as late as October 2002 for example, Xinjiang had no new sites. Although installation progressed rapidly in later years, it is possible that the real infection rates for STDs, and to a lesser extent for HIV/AIDS, remained above the reported rates at project completion. The quality of data analysis was limited by the capability of county-level users accessing provincial data.

This pointed to problems in utilization of corrective feedback. For both components throughout the project period, experience reflected in aide memoires and observations from supervisory team technical experts suggested **the lack of an “information culture,”** such that data might be collected but sometimes go unused. Surveillance results generally were not applied well to formulating plans for prevention, intervention, or strategic direction. For the HIV/AIDS and STD component, links between surveillance data and local interventions were weak particularly at the lower levels.

This was offset to some extent, however, by **encouragement from supervisory missions, which increased utilization.** Partly this was the result of missions encouraging the regular reporting of indicators. The national experts and FLO personnel involved in supervision all played an important M&E role, and their semiannual field visits possibly constituted the most important vehicle for assessing project progress.

The Midterm Reviews (MTRs) were timely, but follow-up was a missed opportunity. Although the MTRs were completed on schedule, the requested amendments were not complete until 2005 due to the delay of approval at the central level, which was too late in the project to carry out much of the recommended changes.

However, **the Final Evaluation reports were thorough** for both components, providing a comprehensive assessment of project impact. In addition to the overview reports, several special studies were also undertaken, including

- An “Implementation and Effect Evaluation of Early Child Development,” which looked at 38 villages of 4 project and 2 control counties of Jilin Province and Xinjiang Autonomous Region.

⁴ Sentinel surveillance refers to the monitoring of a specific disease (or set of related diseases). The sites of sentinel surveillance should be concentrated in geographical locations known to contain high-risk groups consistent with the disease transmission risks.

- “The Report on Effect Evaluation of Health Education” surveyed Hunan, Guizhou, and Hainan provinces from June to July of 2007.
- An “Assessment on Medical Financial Assistance for Women and Children in Poverty Households,” which was completed by the MFA Assessment Group for MCH of the Health IX Project after mail surveying 34 counties selected from all project provinces/autonomous regions and conducting on-the-spot survey samples in 7 project and 5 non-project counties.

Comparing these solid evaluation efforts, of which outcome results are summarized in section 3, with the previously noted poor use of monitoring data suggests that a cultural divide separates Chinese health researchers and managers. Thus, the results of these specific evaluations are at risk of not being transferred widely or utilized well in the health system.

2.4 Safeguard and Fiduciary Compliance

Compliance with critical legal covenants was met for both project components. Albeit with some delays, the midterm report was completed; and leading groups, expert panels, and project offices were maintained. All counties developed medical financial assistance programs and submitted annual intervention plans for HIV/AIDS and STD prevention and control, and the National AIDS Reference Laboratory annual plan was submitted.

The project had limited **environmental impact** since the volume of hazardous medical waste in small health facilities is low. Although HIV/STD interventions increase the need to dispose of condoms and their packaging, the environmental impact is also small and can be handled through the general urban waste management system.

The project integrated **social assessment, stakeholder consultation**, and a focus on the **needs of national minorities**. In particular, MMR and IMR were improved in Guizhou province and Xinjiang Uygur Autonomous Region (with considerable minority residents) in the MCH component, while NGO involvement in HIV/AIDS prevention and control incorporated the concerns and participation of vulnerable populations.

Civil works were limited in the project, and no issues involved **land acquisition and resettlement**.

Auditing requirements were met through provision of annual reports. Adequate accounts were maintained and no major problems were identified with project resource use.

Procurement

The Health IX civil works procurement standard was based on the requirements used for Health VIII. The civil works evaluation report indicates minimal problems involving integration of documents, and contracts not being adjusted according to changes and according to the standard menu and bidding time. Significant delays occurred in

equipment procurement by International Competitive Bidding (ICB), partly because of complex procedural requirements by the Chinese government. Start-up of the National Debt Program also meant that much of the equipment requirements for the blood safety management component were picked up through the Chinese government program instead of being financed through the project. Overall, civil works and goods procurement have been carried out without any notable problems by the FLO.

2.5 Post-completion Operation/Next Phase

During the latter part of the Health IX project implementation, the World Bank initiated a program of analytic work focused on rural health system challenges and reform. This also became the focus of a new operation.

World Bank follow-up

The focus on health system issues is in part a reflection of the World Bank's new Health, Nutrition and Population Strategy, but also of growing recognition on both the Bank and government side that sustained improvements in access to health services, efficiency, and quality will depend on systematic health system reforms. This process has to some extent started with the establishment of the New Cooperative Medical Scheme, the Medical Assistance Scheme, reforms of public health institutions, etc. However, there is a need to ensure effective implementation of these reforms, and adjust design and implementation based on evidence and lessons. This need underpins a new operation focused on strengthening the implementation of rural health system reforms in selected counties. A new rural health project (Health XI), covering 8 provinces and 40 counties, has become effective at the end of December of 2008. This operation will maintain a focus on improving access to and quality of key health services, including maternal and child health, but will engage on higher level system issues than was the case in Health IX.

While HIV/AIDS and STDs remain a significant concern, recent years have seen increased support from both government and other development partners. At the same time, non-communicable disease (NCD) has emerged as a growing threat. Hence, while it is expected that the World Bank will maintain an involvement on HIV/AIDS issues, it is expected that the program will become increasingly focused on NCDs.

3. Assessment of Outcomes

3.1 Relevance of Objectives, Design, and Implementation

Health IX had two distinct sets of objectives. Improving maternal health and child development is consistent with the Bank's CAS/CPS goal of targeted intervention in poor areas, as well as with the Millennium Development Goals (MDGs). Improved prevention and control of HIV/AIDS and STDs is also in line with both the overall Country Partnership Strategy as well as the MDGs. Both sets remain relevant to China's ongoing health challenges.

Many stakeholders within China note that World Bank–supported projects there, including Health IX, initially seem ahead of their time. They get off to ragged starts and only begin to function smoothly after beginning to break down barriers and change the policy environment. This usually takes about three years, after which they become models for implementing the new government policy. The projects may then vanish from sight as other entities take up the challenge, but without that initial practical engagement to prove the concept, the enabling policy shift would have been less likely to occur. Thus the Health IX component on HIV/AIDS and STD was the first large-scale donor project to target these issues in China and met stiff attitudinal barriers on entry. Looking back, Chinese stakeholders recognize the project’s contributions to changing perceptions and introducing new practices, even though it took about three years for the policy environment to become hospitable. The same dynamic occurred with the effort to ensure blood supply safety. Once the concepts were proved, both of these trailblazing efforts receded into the background as national or other donor initiatives entered the field. In the case of MCH, the specific objectives were initially challenging, but highly relevant given the MCH challenges in the country.

Project design was comprehensive and systematic, while providing flexibility for local adaptation. The project’s structure and implementation design was oriented more to the grassroots level than to directly addressing higher-level policy and institutional change. Lessons were learned that had important policy implications. However, the project relied on project managers on the government and Bank side to effectively work with the relevant ministries and agencies to address higher level policy and institutional issues, and this engagement did not materialize. Over time, the policy environment changed dramatically. A redesign could have helped plug the project into informing higher-level policy dialogue with relevant feedback, but this was difficult to achieve given the complexity of the project, the turnover of project managers on the Bank side, and the limited engagement by the Bank on policy issues during the critical period of the project.

Implementation through regular channels for government and health service delivery were consistent with previous Bank-supported projects in China. This approach directs capacity building toward personnel and institutions that remain on the ground after the project is completed, enhancing the likelihood of project sustainability. Challenges to this strategy are posed by personnel shifts, particularly at the leadership level, and by changes in the machinery of government. Health IX witnessed both the advantages and disadvantages of this approach.

3.2 Achievement of Project Development Objectives

ICR Rating: Satisfactory

PDOs are discussed below by project component (for a tabulated and more thorough set of results see Annex 2, which shows outputs by component).

Component 1: Reduce maternal and child mortality and morbidity and improve child survival and development in the poorest areas of five provinces of China.

MCH indicators improved between 1997 and 2007. The Final Project Summary Report showed that MMR decreased in the project areas from 159.3 per 100,000 live births to 45.1 per 100,000; U5 mortality from 80.7 per 1,000 live births to 15.8 per 1,000; IMR from 67.9 per 1,000 to 12.5 per 1,000; the neonatal mortality rate (NMR) from 39.8 per 1,000 to 8.2 per 1,000; and U5 moderate and severe malnutrition from 5.7 percent to 1.6 percent.

Relative to 1997 baseline levels for MMR, U5 infant and neonatal mortality had already dropped significantly by 2000. However, project managers and experts query the accuracy of earlier figures, and whether under-reporting occurred prior to 2002.

Gains in indicators of MCH services as a proxy for “increased level of maternal care,” “better sick-child management,” and “better well-child and systemic newborn care” were not as remarkable, but notable improvement was shown. The antenatal care rate increased from 63.6 percent in 2000 to 75.8 percent in 2007; the postnatal visit rate changed in Xinjiang Autonomous Region from 61.6 percent in 2000 to 83.6 percent in 2007 (the other four project provinces remained mostly stable); and the hospital delivery rate rose from 53 percent in 2000 to 86.2 percent, an increase of above 30 percent that satisfies the 20–50 percent expansion explicitly called for as a project objective. Child nutrition surveillance increased by 11 percent and the exclusive breast-feeding rate was kept above 70 percent.

As for the key performance indicator of “better family and community participation, education, and counseling,” all levels of project implementation strengthened their health information outreach; and heightened awareness of self-care and increased use of health services among the target population was reflected in the KPI for “improved access to MCH care services, especially among the poor.” A survey in Hunan, Guizhou, and Hainan provinces in the summer of 2007 found changes in knowledge, beliefs, and behaviors as well as increased service demand from the target population. The Early Childhood Development component produced positive outcomes, including better knowledge and healthier nurturing behaviors of mothers, that helped reinforce the “better sick-child management” KPI and created a better environment for ECD. Consistent with the KPI for “increased health worker training,” short- and long-term instruction and overseas study tours were carried out per project objectives. Findings showed increased capacity for project managers, project officials, and MCH workers.

Although these changes were significant, how much were they directly attributable to project activities given the multiplicity of factors that influence MCH? The special evaluation studies offer insight. The Final Evaluation Report of the Health IX Project’s MCH Component compared project to matched non-project areas, and found little difference in the decrease in MMR. This may be attributed to introduction of the new national Reduction & Elimination program for MCH as well as the impact of continued human and economic development in China, all of which impacted both project and non-

project areas. Indeed, those areas that carried out the R&E program alone (non-Health IX areas) did not show a marked difference in MMR decrease. Comparing non-project areas to those carrying out both R&E and the Health IX project, however, shows significant decreases in MMR in the latter, suggesting that a combination of both is needed for optimum outcomes. Decreased MMR is related to improved hospital delivery rates and prenatal and postnatal care. In the project areas, hospital delivery rates improved in Health IX counties just as markedly as in R&E and combined R&E and Health IX areas. Delivery rates in matched nonproject areas also improved, but at a 25 percent slower rate.

U5 severe malnutrition, although slightly down overall, varied across provinces and actually increased for Xinjiang Province.

Component 2: Prevent and control morbidity and mortality due to the human immunodeficiency virus (HIV)/acquired immune deficiency syndrome (AIDS) and sexually transmitted diseases (STDs) by implementing comprehensive programs at the provincial levels, and by building technical capacity at the central level.

The final evaluation report “Health IX HIV/STD Prevention and Control Subproject” showed a more complex picture of morbidity rates than anticipated. This is partly because of the complexity of monitoring disease incidence and prevalence, and the fact that the project was a set of specific targeted interventions into a rapidly changing social environment.

Since reporting and surveillance was under-developed for both HIV and STDs at the beginning of the project, difficulties were built in to claiming project reductions in “HIV seroprevalence” and “STD prevalence.” Indeed, the dynamics are such that an initial jump was to be expected in newly reported cases. Increasing prevalence also was likely even with successful prevention activities since advances in HIV care make the disease more chronic rather than fatal. As expected, the percentages of increase rose in newly reported cases (incidence) and total reported cases (prevalence) of HIV in project provinces. According to “Health IX HIV/STD Prevention and Control Subproject,” HIV prevalence increased at a slower rate for project than for nonproject areas, particularly after 2004 when nonproject areas saw a spike. Similarly, incidence increased more slowly in project than nonproject areas. On the other hand, control counties started with a much lower baseline (only four cases compared to 1,897). Nonetheless, the results indicate that the Health IX provinces made gains toward project objectives when compared to nonproject areas.

HIV prevalence for high-risk groups in project areas, including intravenous drug users and commercial sex workers, initially increased between 1999 and 2001 before decreasing between 2002 and 2006. However, HIV infection rates varied considerably between high-risk groups, indicating the difficulty of judging trends when significant changes in HIV incidence and prevalence in high-risk groups occur.

The final evaluation showed the STD case totals reported in project counties were not very different compared to control counties. When analyzed by disease type however,

reported STD cases for project counties increased remarkably between 1999 and 2001 compared to control counties, which may be attributable to more attentive reporting/hospitalization/diagnosis rather than an outright increase in STDs. Between 2001 and 2004, gonorrhea, syphilis, condyloma accuminatum, and other STDs showed a decreasing trend (dropping 40.4 percent, 74.3 percent, 64.6 percent, and 81.9 percent, respectively). The number of Nongonococcal Urethritis (NGU) continued to rise significantly, however. From these figures it may be deduced that the number of infections for all STDs except NGU are falling, while the latter is still subject to improved services that reflect increased reporting. Indeed, nongonorrhea started to decline during 2004–06, joining the trend line of the other STDs. Control counties tended to show slow but steadily rising rates, indicating that their reporting mechanisms and quality of treatment remained poor.

Unfortunately, after 2006 the percentage of reported cases for all STDs, except for gonorrhea, increased again. Several factors may be at work. First, by the concluding stage of the project, the funding for scheduled STD interventions was mostly exhausted, and other control and prevention measures decreased. However, this also coincides with the time when the morbidity rate of STDs in comparison counties rose the fastest; this may have resulted from accelerated STD infection rates in the comparison counties or from significant improvement of those counties' medical service quality. The percent of reported syphilis during this period increased in both the project and comparison counties under investigation, implying that the infection rate of syphilis is rising, case reporting has improved, or diagnostic capacity has increased.

STD prevalence in specific vulnerable groups was not incorporated in the design of Health IX. A point prevalence survey was conducted in 2007, however, for the final evaluation, which showed that project areas had a statistically lower point prevalence (15.4 percent) of all STDs than did comparison areas (25 percent).

Three rounds of behavioral surveillance data were conducted, showing statistically significant improvements in reduction of risky and adoption of safer behaviors by CSWs, IDUs, and young students (except for condom use by young students in most recent sex, for which there was no change). These improvements suggest progress on KPIs concerning “increased policy environment supportive of HIV prevention and care” and “improved HIV/STD interventions and support.” They also suggest that project focus on specific groups at risk was successfully achieved.

Component 3: Reduce the transmission of blood-borne infections by assuring a safe and adequate blood supply with improved transfusion practices.

Blood management objectives were reached readily. Voluntary blood contribution increased from 5 percent to over 96 percent; planned donation⁵ decreased from 81.2

⁵ It is a form of unpaid blood donation organized by any working units that are assigned with quota for blood donation. Incentives such as vacations, etc are provided to the donors by their employers. Such a practice of blood donation was prevalent in 1990s, and has been gradually replaced by unpaid voluntary blood donation.

percent to less than 5.2 percent; clinical component blood transfusion increased from 16.5 percent to over 91.7 percent; and HIV, syphilis, Hepatitis B Virus (HBV), Hepatitis C Virus (HCV), and Alanine Aminotransferase (ALT) positive rates were consistently detected and small. Provinces continually recruited and retained voluntary unpaid blood donors (VUBD), and promoted rational clinical use of blood. Blood laws were legislated and implemented. No shortfalls in meeting requests for blood have been reported. All project provinces except Guangxi achieved 100 percent VUBD. Shanxi now has one of the best blood safety programs in the country, with very high rates of 400 milliliter donations, repeated donations, and donations from the rural population. There were no reports of HIV, Hepatitis B, or Hepatitis C transmission through transfusion in any project county.

3.3 Efficiency

The economic rationale of the project is premised on gains life years. These gains were expected to result from a range of channels, including: (i) improved and expanded policy environment and multi-sectoral cooperation; (ii) improved management and quality of MCH services and blood transfusion services; (iii) improved family and community participation in health education; and (iv) improved interventions and support on HIV/AIDS/STDS and etc. China has seen significant reductions in maternal and child mortality, as well as improvements in disease control, over the life of the project. The project evaluation indicates that progress has been greater in the project areas compared to purposively selected comparator counties, suggesting a positive impact of the project. Of course, given the complex and rapid changes in the policy and institutional context over the last decade, these conclusions can only be considered tentative. Moreover, insofar as the project has achieved the expected “spill-over effects” on non-project areas through policy changes, institutional reforms, expansion of innovative interventions, and capacity strengthening, a comparison of project and non-project areas would underestimate the project impacts.

Given the inherent difficulties in assessing the project impacts, it is also difficult to assess whether the costs involved in achieving the project outcomes are reasonable. However, there are good reasons to believe that the project has impacted on mortality rates, coverage of cost-effective HIV/AIDS prevention and control interventions, and improvements in blood safety in the project areas, and that the project has contributed to policy reform and capacity strengthening more broadly, in particular in the area of HIV/AIDS prevention and blood management. Of course, inefficiencies in China’s health system, arising from the fragmentation of public health responsibilities, lack of clarity about roles and responsibilities across government, and adverse incentives, have also undermined the efficiency of project support. Some of these inefficiencies could potentially have been avoided if the project had engaged more effectively on health system issues at provincial and national level.

3.4 Justification of Overall Outcome Rating

Rating: Satisfactory

China has seen significant improvements in MCH, HIV/AIDS and STD prevention and control, and blood management over the life of the project. These improvements are of course not confined to the project areas, and can clearly not be fully attributed to the project. However, the project evaluations provide some evidence that the project areas have done better than relevant comparator areas. More importantly, there is evidence to suggest that the project has had broader impacts on policy thinking, capacity and attitudes of government officials, and the coverage of key interventions, and that it has helped local levels to accelerate their response to changes in official government policy on the issues covered by the project.

3.5 Overarching Themes, Other Outcomes and Impacts

(a) Poverty Impacts, Gender Aspects, and Social Development

The project was socially inclusive of poor women and children in the MCH component and of high-risk groups—including IDUs, CSW, and MSM—in the HIV/AIDS and STD component. To meet CAS objectives for reducing inequalities, project provinces were chosen based on relative economic disadvantage. There were no gender specific analyses of HIV/STD incidence or prevalence.

For the MCH component, even though the target groups were the poorest counties of five relatively poor provinces, the MFA was unsatisfactory at first, only reaching a small percentage of those targeted (largely due to lack of counterpart funding) until the overall policy environment shifted, that is, until NCMS, R&E, and other government medical financing schemes were introduced.

Over time, the HIV/STD component contributed to a change in attitudes among government agencies and service providers, and pilot programs targeted towards vulnerable groups (CSW, IDU, and MSM) were implemented. The participation of NGOs in the program contributed to increased awareness and acceptance of the needs of these vulnerable groups.

(b) Institutional Change/Strengthening

The project helped strengthen local infrastructure and capacity for both of its major operational components.

For MCH, it successfully increased budget allocations for basic preventive health services. An improved training program for health workers and better management practices for the system of maternal and neonatal care also were introduced. Consolidation of MCH outcomes is likely to need ongoing policy and training support,

especially for the poorest areas, since local government financial support capacity remains limited.

The HIV/AIDS component strengthened central and provincial government capacity, not so much to plan and implement effective disease prevention and control programs as to take on new challenges once considered too sensitive to confront. Many local policies were developed for HIV/AIDS, and in some project jurisdictions a framework for multisectoral coordination became well established. Midway through the project, as previously noted in section 3.1, significant shifts occurred in the policy environment that provided opportunities to help test new models, such as piloting methadone maintenance therapy. Beyond these attitudinal shifts, infrastructure also improved. The national HIV/AIDS laboratory developed more effective techniques and procedures to improve HIV testing accuracy and trained provincial and local personnel to use them. Much of the sentinel surveillance network in the four project provinces was supported by Health IX. Additionally, Health IX pioneered new intervention models that are now deployed in other projects, although recognition of the contribution seems confined to those who have been involved since the outset in combating HIV/AIDS in China.

Broader participation was encouraged both externally among organizations and internally through operational development. NGOs were instrumental in engaging high-risk groups, contributing to the shift in the policy environment noted above. The social mobilization role of NGOs became incorporated conceptually into government policy, and the definition and effectiveness of that role has also expanded. At first, only the major government-organized NGOs were involved, which were initially judged by national experts to be poorly informed with highly prejudicial notions about HIV/AIDS. The AusAID co-financed training, however, helped open minds and develop capacity for proposal writing and better interventions; other forms of community-based groups (such as MSM peers, ex-CSWs, PLWHA, and so on) increasingly have become involved. These organizations are now active participants at all levels in the HIV/AIDS prevention and control effort. Both the MCH and HIV/AIDS components introduced participatory methodology for devising health education materials, outreach counseling, and communication strategies, which strengthened their program development and targeting.

The blood safety component supported and accelerated implementation of new national policies to improve the collection, quality, and use of blood products and strengthened provincial and local efforts to rationalize use of blood products in medical care. Project participants credit Health IX with helping them implement government policy on VUBD and introduce quality-control systems. They have been surprised at how invaluable these “soft” activities have proven to be. Health IX’s policy alignment was an important part of their being able to quickly and successfully complete the project.

(c) Other Unintended Outcomes and Impacts (positive or negative)

Project participants consistently identified mindset changes and better management skills as outcome benefits. The shift in attitudes toward HIV/AIDS and blood donation practices has been noted already. An interesting but less noticed shift occurred in the MCH component, involving perceptions about the structure of care rather than those who

were its objects. Community leaders and families, who initially saw childbirth as a highly individual matter, reported appreciating the focus on access and equity, and overcoming initial doubts about government involvement in MCH.

The project missed some policy opportunities for greater impact. More influence could have been exerted during establishment of the HIV/AIDS coordination office under State Council (SWACO), the MA and NCMS, and the Reduction and Elimination Program to strengthen both design and implementation arrangements. The lost opportunities were particularly noticeable in relation to the MA and NCMS, when counterpart funding for Health IX's MFA ran out and the new schemes essentially replaced the project in providing financial assistance to a significant part of its target population.

There was also a lack of advocacy for action to fill policy vacuums. For instance, national policy to combat sexually transmitted diseases lacked focus, with steps needed to clarify funding requirements for STD clinics and assure that accredited doctors see patients. To some extent, the project was constrained from addressing such issues by fragmentation of responsibilities within MOH.

Overall, the lower levels of project participants felt most strongly the benefits from improved practices, particularly in applying lessons learned to other areas of work. At the provincial level, there were variable levels of policy engagement and some aspects of operational management were of concern. At the national policy and overall project management level, there was sometimes a lack of policy engagement, resulting in missed opportunities.

4. Assessment of Risk to Development Outcome

Rating: Negligible to Low

While the exact degree of sustainability will vary by provinces, the substantial changes that have occurred in the overall policy and health financing environment suggest that positive outcomes generally will not be rolled back.

The accomplishments of the **MCH** component are supported by substantial government commitment through the R&E program. Health IX provided vital bridge support for MCH work during a difficult period of government underfunding, and the recent incorporation of MCH as part of a primary care package will contribute to its sustainability. The goal of Health IX's MFA is now assured, not as originally planned by the project, but through the national policy that created the new MA scheme, supplementing the NCMS. The NCMS is very important for MCH components such as hospital delivery that have been included in the benefit package in many parts of the country. It should be noted, however, that the poorest counties may be unable to sustain government support for some project activities, particularly the MIS, training, and supervision.

Sustainability of the **HIV/AIDS** component is generally not a problem given the myriad new projects being implemented with both government and donor funds (including the GFATM and philanthropies such as the Gates Foundation). Indeed national and international stakeholders are warning that an overabundance of HIV/AIDS projects poses the challenge of acquiring the human resources to use the funding well and implementing activities through a sectorwide approach—that is, avoiding wasteful duplication and covering all areas of need by working out how to scale up appropriately, in a coordinated way. The activity whose sustainability seemed in greatest doubt was behavioral surveillance; but its incorporation into a system of integrated surveillance, partly through voluntary counseling and testing (VCT) sites, makes its continuance more likely. The other area of potential concern involves hard-to-reach locales. For example, the WB and AusAID both finished their projects in Xinjiang Autonomous Region at the same time, and the remaining project run by the GFTAM is small, focused on IDUs, and operates only in the region's southeast, leaving many areas and high-risk groups uncovered. For the time being, ongoing engagement is needed by the provinces/autonomous regions with donor organizations to cope with gaps in the changing policy environment.

AusAID and JSDF funding contributed greatly to piloting of support to NGOs to deliver programs to high-risk groups. Most of these programs were small-scale, so possible service gaps from closure of Health IX may not seem sizable. However, the innovation these efforts represent is valuable, and insofar as Health IX contributed to greatly enhanced NGO capacity to seek funding, implement programs, and account for their activities, skills have been acquired that improve NGO access to support from other donors.

Sustainability is also not an issue for the **blood management** component. Health IX's primary contribution was in training since much of the equipment support came from the National Debt Program. Blood management has been established in the government budget system so its access to financing is assured. Health IX's true legacy involves the rapid shift from a system of mandated and paid blood donations to one of voluntary unpaid blood donation. A fundamental shift in community attitudes and behavior occurred, as seen in the outpouring of donors following the 2008 earthquake (shortly prior to Health IX closing).

Unfortunately, current health financing arrangements make continuity of the **STD** component problematic with. Indeed, component implementation during the project was hindered substantially by that financial framework, which considers testing and treatment a personal rather than a public health service. Since STD clinics are hospital-based and have to find their own revenue, they have little incentive for investing in prevention and education, or for training private doctors who, after all, are competitors in the marketplace. Limited progress in training private physicians is a barrier to harnessing their skill and knowledge for sustainability and most importantly to scaling up. Government funding and a different policy framework, informed by public health principles, are needed, but policy advocacy was neither part of the project design nor apparently undertaken during implementation. STD management unfortunately became the project's poor cousin.

Notwithstanding recent economic turmoil, the long term economic and fiscal outlook is good. The Chinese health policy environment remains dynamic, with increased openness and growing commitment to reducing inequalities.

Yet substantial challenges remain. Investment in public health infrastructure post-SARS has focused on hardware rather than systematic institutional reform. The substantial flow of donor support for HIV/AIDS acts as a magnet for health workers to the field, but the absorptive capacity may have reached its limits. A more sector-wide and flexible approach is needed. Recent GOC announcements about health sector reform may improve health care access further through reduction of currently substantial out-of-pocket payments, but important issues regarding overall health system architecture remain.

5. Assessment of Bank and Borrower Performance

5.1 Bank Performance

a) Bank Performance in Ensuring Quality at Entry

Rating: Satisfactory

Impetus for the project came from several other successful projects. While the GOC proposed the focus on MCH, it was the Bank that advocated for a comprehensive, multi-sectoral component to address HIV/AIDS and STDs. Project preparation involved prominent international experts, including UNAIDS and lead specialists within the Bank, and was informed by the experiences and designs of Health VI and Health VII (Health Promotion). The design was sufficiently flexible for adaptation in different locations and for other changes as needed during implementation. The project was particularly welcomed by the small core of emerging HIV specialists in China.

The choice of provinces for the HIV component was careful: Xinjiang and Guangxi were ranked second and third in HIV prevalence; Fujian had a coastal port with migrant workers; and Shanxi was midranked in economic development with many mines and a history of unsafe blood donations and transfusions in its southern part. Choices for the MCH component were based on covering poor provinces not in Health VI.

The project drew on the national experts of Health VI and, to a lesser extent, Health VII. The project preparation process also provided for capacity-building experiences such as overseas study tours for provincial leaders on HIV/AIDS. An experienced FLO project manager coordinated preparation within China, building on his established relationship with the Bank Task Team Leader at the time.

Despite these solid pillars to build on from the preparation process, project implementation got off to a shaky start, suffering delays and slow disbursement. The counterpart financing expectations and the procurement procedures related to

International Competitive Bidding contributed to the slow pace, as did some skepticism, if not resistance, to new concepts. Delayed approval by NDRC of the revised procurement plan, and the inflow of new development assistance to some of the project provinces, were also important constraints. Finally, a lack of training in project management seems to have contributed to slowdowns (which is exacerbated by difficulties with counterpart funding).

(b) Quality of Supervision

Rating: For the Blood management component the rating is Highly Satisfactory. For the remaining components the rating is moderately Satisfactory.

Supervision missions were carried out consistently, apart from the disruption from SARS in 2003. Supervision during the initial years was characterized by continuity of personnel from the design period, including for technical expertise. From the Midterm Review onward that changed. The Bank supervision team was significantly smaller, with the HIV technical input provided by the World Bank Office in Beijing, and there were several TTLs. The only thread of continuity was the international expert involved with the blood safety subcomponent, who was highly respected by project participants. This continuity of expertise was rewarded by successful and early achievement of project objectives for safeguarding the blood supply.

There were, however, insufficient resources and discontinuities in other components. Discontinuity of task team leaders, particularly midway through implementation for the HIV and MCH components, sapped project momentum at a time when the policy environment in China was changing rapidly. Policy dialogue was disrupted at a critical time in the project. By the time the final Bank TTL was in place, FLO was becoming irritated with the time required to bring the team leader up to speed with what had been going on, although a sound professional relationship was maintained at all times.

Over time, the project became nearly invisible due to the lack of a steady Bank presence in Beijing. At closure of Health IX, the MCH division within MOH had a minimal understanding about the project. UNICEF was more aware of the HIV component than the MCH component. WHO was only aware of the blood safety management component, and that was because training for it was based on WHO guidelines. Both China's Center for Disease Control (CDC) and UNAIDS had little detailed knowledge of Health IX's activities or contributions. In part, this reflects staff turnover in UNAIDS and compartmentalization within CDC, but the project could have done more to overcome these constraints.

(c) Justification of Rating for Overall Bank Performance

Rating: Moderately satisfactory

Project supervision was rated moderately satisfactory. The project is rated satisfactory in terms of PDO achievement. "Quality at entry" is presumed to have been rated satisfactory. As noted, the biggest issue in respect of Bank performance was the lack of continuity and

presence, which hampered the Bank's ability to effectively address issues and constraints that arose in implementation, and to use the project engagement to strengthen the policy dialogue with government counterparts on key issues.

Moreover, some stakeholders questioned whether the Bank deliberately vacated the space carved out by the HIV component, or if the effort was inadvertently overtaken by the entry of other organizations into the field. This uncertainty stems from five factors: (a) a major shift in national HIV policy occurred in 2003, when Bank TTL arrangements were unstable; (b) the project design did not need modification, but no effort seems to have been made after the MTR to reassess project activities and priorities in the context of the new policy environment; (c) appropriate senior-level presence was lacking in Beijing to engage with major policy shifts under way; (d) weak dissemination of project experiences; and (e) the Chinese express some reservations about how interested Bank TTLs have been in the issue since the original team leader. This doubt is puzzling since the World Bank was a primary driving force for the HIV/STD component. What can be said is that the turnover in Bank management undermined the crucial push needed for implementation during the project's middle period and led to a major gap in policy dialogue just when the policy environment was rapidly changing and the possibility of meaningful impact was great.

5.2 Borrower Performance

(a) Government Performance

Rating: Satisfactory

GOC demonstrated strong ownership of the project during its preparation and early stages of implementation. It also appointed well-qualified national experts to the project. However, over time, changes in the technical leadership created gaps in knowledge and consequently diminished interest. Government restructuring led to a slow start for the MCH component, and the lack of cross-county subsidization for counterpart funds resulted in some counties having to drop out. National experts for the MCH component became too busy with other projects over time.

(b) Implementing Agency or Agencies Performance

Rating: Moderately Satisfactory

Ministry and FLO

The Foreign Loan Office was responsible for overall project coordination and conduct of national activities. The initial manager appeared to lose interest and momentum, but stayed responsible for the MCH component, while the HIV component was picked up by a different project manager in 2003. It was not until 2005 that all aspects of the project were again put under one head (the person who had been running the HIV component). His dedication, drive, and good relationship with lower levels ultimately enabled the delivery of project objectives.

Despite staffing changes, the FLO provided good project management and communication with the MCH Division in early periods about the project situation (by sending reports and holding meetings, and so on) and with the Blood Management Division. Many supervision visits were conducted jointly with technical staff from the MOH and other agencies.

However, by the project's middle period, there was limited engagement by MOH divisions due in part to their engagement with other projects. Some MOH divisions, perhaps as a result of frequent changes in personnel, could not clearly say by the end of the project what the Health IX contribution was—other than perhaps helping a few previously lagging provinces to improve their performances. These divisions did not see themselves necessarily as a beneficiary or a partner.

Disbursement of counterpart funds was better for civil works, equipment, and local training than for overseas training, operational study, and other areas of technical assistance. For the MCH component, changes to civil works in the initial 1997–99 plan were made to respond to real needs that had emerged, minimize overlapping construction, and avoid wasting money. Beyond the monitoring of plans and activities, however, no real central force was driving to improve reporting quality and timelines against key performance indicators. Among the reasons why are the following: the KPIs did not always correspond well with regular administrative reporting; the infrastructure for surveillance had to be implemented through the project; and no central expert was assigned to drive this aspect of the project's work.

Provincial/county entities

Although provincial and county performance varied, most participating entities were fully committed to achieving project objectives.

Financial management at project entry got off to a slow start at the provincial/regional level because of the need to learn the Bank's system and decide how to reconcile its requirements with those of the Finance Bureau, which were differing, in ways that satisfied both the Bureau and the Bank. Counties also had difficulties in getting up to speed with the World Bank system. The slow start at field level was exacerbated by local leadership not understanding what the project involved, why it was important, the nature of the counterpart requirement, and why it was necessary to pay upfront and get reimbursed by the Bank later. Personnel turnover at the provincial level, partly associated with governmental reorganization, contributed to delays in project financing and implementation.

Although there were multi-sectoral leadership groups for HIV/AIDS prevention and control in all project provinces and counties, leadership was inconsistent and not all departments were active. Policy development between localities varied, and was more limited in scope in some areas than others. The same situation characterized policy implementation. Additionally, coordination between government departments and NGOs remained rather weak. Despite these problems, the project did create a space for sectors to come together for joint training, and stakeholders report that these opportunities

became an important avenue for working out differences (such as over needle exchange and methadone clinics).

Some confusion about management of operational research occurred between the provincial and county levels. Although designed initially for provincial-level implementation, the task was effectively delegated to the counties. Given the on-lending arrangements as well as counties' limited capacity to undertake or manage research, the delegated activities were poorly understood, and seemed onerous and unnecessary. Hence they lagged.

The issues that emerged in operational research were paralleled in project monitoring and evaluation. Given limited capacity and a historical orientation toward administrative reporting to meet the interests of leaders, no real appreciation existed for the value and uses of ongoing monitoring of key performance indicators.

(c) Justification of Rating for Overall Borrower Performance

Rating: Satisfactory

The overall performance of the borrower was satisfactory, given the achievement of PDOs. Although the ISRs periodically recorded less than satisfactory performances on some issues—such as counterpart funding, monitoring and evaluation, and procurement, these implementation barriers ultimately were overcome in the final years of the project.

6. Lessons Learned

Health IX generated several lessons, many of them shared with other projects but some that are intrinsic to this particular project. These lessons are widely applicable in China as well as for specific health sector projects in country.

The project should have engaged more effectively on health system and policy issues.

The MCH component was designed as a response to the problems experienced in the rural system of maternal and child care following the economic reforms of the 1980s. Over time, the policy environment became more favorable, with the establishment of the NCMS and the Reduction & Elimination Program, and with increased government resources and attention flowed to MCH. Up to that point, the project had been primarily focused on supporting training and specific interventions, and was not well positioned to inform policy thinking on health system reform. Similarly, in the case of the STD sub-component, an inadequate government policy and institutional framework is widely believed to have undermined the impact of the project. Health IX may have been more influential had it concentrated more system-level issues rather than on direct technical assistance.

Other parts of the project were more successful in contributing to shift in policy thinking and laying the foundation for more effective government investment and programs. For example, the blood safety subcomponent began with the coalescence of government concern about the blood supply that had yet to find a way of instituting and financing safer practices. Health IX was able to provide both from the beginning, with the

international technical expertise it offered being particularly important. The project's work ultimately was overshadowed by government investment through the National Debt Program, but those involved point to Health IX as a trailblazer showing the way forward. Similarly, the HIV/AIDS component helped shift prevailing attitudes and contribute to meaningful policy changes. The policy environment evolved as Health IX was able to demonstrate technical assistance as it became accepted.

Excessive complexity of design undermined the effectiveness of the project. There are many reasons for the mixed record on high level policy and system issues. One of the constraints to an effective engagement on these issues was the complexity of project design. Health IX effectively had three separate components, with a broad range of technical issues, and with different international and local experts. This complexity was compounded by a broad and scattered geographic coverage of the project. These features of the project made it difficult for the TTL to be fully engaged across the board. With a fixed budget, it also proved difficult to ensure adequate technical input in supervision.

The project failed to remain relevant as a result of weaknesses in Bank supervision and slow implementation. The ability of the project to be an effective platform for policy engagement was also undermined by weaknesses in supervision. The turnover of WB task managers (and limited presence in Beijing) led to a lack of continuity. It also contributed to a failure to effectively use the mid-term review to reprioritize (or redesign) project activities as circumstances changed, and to sustain relationships and trust with government counterparts and development partners. For example, when the HIV/AIDS Coordination Office under the State Council was set up, the head of the office welcomed the invitation to join a Health IX supervision mission. Unfortunately this relationship was not followed up when the Bank TTL changed, and no subsequent connections occurred with the HIV/AIDS Coordination Office. As a result, there were missed opportunities in securing the policy partnership and opening policy dialogues.

Slow disbursement of project proceeds led to an extension of the project. This enabled funds to be fully disbursed. However, over time, project participants became bored with a lengthy project, particularly if objectives were met early or were no longer aligned with changing policy environments. Moreover, national experts also became busy with other activities.

The project could have done a better job on evaluation and lesson-learning. M&E traditionally has not been well integrated into project design and implementation in health projects in China. Given the lack of an “information culture,” as described by a number of technical experts, the focus for project management is more often on input rather than on expected functional capability or on the results/impacts. More attention could be devoted to process evaluation and lesson learning during project implementation, and measurement of capacity building could be more explicitly considered. This could have been achieved by having clearer expectations and templates for case studies and other approaches for capturing project experiences throughout project implementation. The institutional arrangements for lesson learning should also have been given more thought. For example, the compilation and regular updating of project technical guidelines,

whether about HIV/AIDS and STD prevention and control or MCH (especially ECD), required an institutional home.

7. Comments on Issues Raised by Borrower/Implementing Agencies/Partners

(a) Borrower/implementing agencies

The borrower/implementing agencies have reviewed the draft ICR. Key comments concerned the interpretation of some data and clear indication of data sources. All the comments from them have been incorporated in the revised ICR.

(b) Cofinanciers

AusAID was consulted, but declined to provide any comments.

(c) Other partners and stakeholders

Not applicable.

Annex 1. Project Costs and Financing

(a) Project Cost by Component (in USD Million equivalent)

Components	Appraisal Estimate (USD millions)	Actual/Latest Estimate (USD millions)	Percentage of Appraisal
Component A: Improved Maternal Health and Child Development (MHCD)	53.92	56.16	104%
Component B: Improved Prevention and Control of HIV/AIDS/STDS and Other Blood Born Infections	34.99	36.78	105%
Component C: Project Coordination and Support	5.85	5.85	100%
Total Baseline Cost	94.76	98.79	104%
Total Project Cost	94.76	98.79	104%
Front-end fee IBRD	0.10	0.10	100%
Total Financing	94.86	98.89	104%

(b) Financing

Source of Funds	Type of Cofinancing	Appraisal Estimate (USD millions)	Actual/Latest Estimate (USD millions)	Percentage of Appraisal
International Bank for Reconstruction and Development		10.00	9.60	96%
Source of Funds	Type of Cofinancing	Appraisal Estimate (SDR millions)	Actual/Latest Estimate (SDR millions)	Percentage of Appraisal
International Development Association (IDA)		36.80	36.80	100%

Annex 2. Outputs by Component

The baseline and completion key performance indicators are presented as they were measured in the final evaluation reports. The KPIs are presented as they were in the PAD.

Performance Development Objective	Key Performance Indicator	Measure	Baseline	At Project Completion
<i>Component 1: Reduce maternal and child mortality and morbidity and improve child survival and development in the poorest areas of China.</i>	Reduced maternal and child and infant mortality and morbidity	MMR (per 100,000 live births)	159	45.1
		Hunan	93.8	37.3
		Hainan	69.1	24.3
		Jilin	75.5	30.1
		Guizhou	191.7	57.9
		Xinjiang	576.0	82.4
		IMR (per 1,000 live births)	67.9	12.5
		U5MR (per 1,000 live births)	80.7	15.8
		U5 moderate and severe malnutrition	5.7%	1.6%
	Increased level of maternal care	Antenatal Care rate (≥5visits)	16.0%	75.8%
	Better sick-child management	Hospital Delivery rate	30.6%	86.2%
		Child nutrition monitoring rate	33.8% (2000)	52.6%
	Better well-child and systemic newborn care	Exclusive breastfeeding for 4 months	73.2% (2002)	71.1%
		Neonatal mortality rate (per 1,000 live births)	39.8	8.2
		Postnatal visit rate	33.0%	84.2%
	Better family and	Health education coverage of		

Performance Development Objective	Key Performance Indicator	Measure	Baseline	At Project Completion
	community participation, education, and counseling	premarital care population	64.1% (2000)	61.7%
		Health education coverage of pregnant women	82.7% (2000)	91.9%
		Health education coverage of children's parents	61.9% (2000)	83.3%
	Better management of MCH services	Improved planning and coordination of MCH services		Four-tier management mode set up — central, provincial, prefecture and county levels
		Improved quantity and quality of supervisory support between levels		Regular supervision visits assessing management by central level and WB, including project management workshop carried out
		Improved function and use of MCH management information and surveillance systems		MIS system established, and although at first deficient, improved throughout the project
	Increased health workers training	Operational research		Disbursal of some funds, however management and activities were lacking
		Health IX Short-term training. Completed as a percent of planned		172%
		Health IX In-country Training Progress Short term		1,104,228 person-time participants
		Long term		12,201 person-time participants

Performance Development Objective	Key Performance Indicator	Measure	Baseline	At Project Completion
		Clinical advanced studies Long-term training Health IX Overseas Training Health IX Inner Consultants' Services		99.6% of planned completed 121.1% of planned completed 99.2% of planned completed 97.4% of planned completed
	Improved access to MCH care services, especially the poor	Project completion actual of planned coverage of MFA for Target population Hospital Delivery rate Hunan Hainan Jilin Guizhou Xinjiang Antenatal Care rate (≥ 5 visits) Hunan Hainan Jilin Guizhou Xinjiang	30.6% 34.0% 52.9% 45.4% 11.6% 27.2% 16% 21.9% 11.4% 34.1% 9.6% 9.9%	66.3% 75.8% 95.4% 96.6% 98.1% 55.9% 87.3% 86.2% 86.6% 58.0% 73.0% 70.5% 69.6%
Component 2: Prevent and control morbidity and mortality due to HIV/AIDS and	Reduced HIV seroprevalence	HIV prevalence rate among high-risk groups - Drug users - Commercial sex workers - STI outpatients	8.38% (1999) 2.99% (1999) 0.21% (1999)	12.90% (2006) 0.71% (2006) 0.93% (2006)

Performance Development Objective	Key Performance Indicator	Measure	Baseline	At Project Completion
<i>STDs by implementing comprehensive and multisectoral public health programs at the provincial levels, and by building technical capacity at the central level.</i>				
	Reduced STD prevalence	Total STI cases reported per 100,000 population	53.8 (1999)	74.3 (2006)
	Increased Policy environment supportive of HIV prevention and care	No. of supportive policy areas in cities for HIV/STI prevention and treatment	55 (2000)	211 (2007)
	Improved HIV/STDs interventions and support	Health education by output for year -Newspaper -Leaflets (10,000 copies) -Picture posters (10,000 copies) -Face to face (10,000 person times) Media -No. times television broadcast -No. times radio broadcast Proportion project cities with Interventions to - Drug Users - Commercial sex workers - Floating population - Women	1999 275 issues 409.4 53.5 133.4 646 251 15% 30% 13% 32%	2006 1,281 issues 852.3 170.5 542.1 11,897 30,753 51% 82% 59.5% 64%

Performance Development Objective	Key Performance Indicator	Measure	Baseline	At Project Completion
		- Students	35%	74%
	Improved HIV/STDs surveillance system	No. new HIV sentinel surveillance sites set up Total volume of HIV sentinel surveillance Guangxi Xinjiang Fujian Shanxi	0 sites 9,622 4,554 1,664 1,196 2,208	146 sites 200,277 92,698 43,729 29,500 34,350
<i>Component 3 Reduce the transmission of blood-borne infections by assuring a safe and adequate blood supply with improved transfusion practices.</i>	Increased voluntary blood contributions, quality assurance testing, and transfusion practices	Proportion of voluntary blood donation Guangxi Xinjiang Fujian Shanxi Proportion of repeated donations Guangxi Xinjiang Fujian Shanxi Proportion of 400 ml blood donation	30% 8.8% 76.6% 33% 11% 2% 17.9% 17.3%	100% 100% 100% 100% 49.4% 40.4% 43.5% 47%

Performance Development Objective	Key Performance Indicator	Measure	Baseline	At Project Completion
		Guangxi Xinjiang Fujian Shanxi	- 0.30% 3.53% 3.20%	44.95% 43.20% 49.60% 93.50%
		Per thousand population blood utilization		
		Guangxi Xinjiang Fujian Shanxi	- (1999) 893.1 ml (1999) 1,018.7 ml (1999) 1,657.1 ml(1999)	3,685.0 ml (2006) 1,226.9 ml (2006) 2,084.5 ml (2006) 2,441.3 ml (2006)
		Proportion of clinical component blood transfusion	-	96.41%
		Guangxi Xinjiang Fujian Shanxi	18.06% 53.72% 16.50%	96.20% 99.08% 91.70%
	Reduced transmission risks of HIV, Hepatitis B, and Hepatitis C	Positive rate of donated blood HIV Syphilis Hepatitis B -HBsAg Hepatitis C - HCV ALT		Less than 0.3% Less than 1% Less than 1.5% Less than 0.8% Less than 3%

Annex 3. Economic and Financial Analysis

Annex 4 of the PAD describes the rationale for the project and the methodology of the economic analysis at the appraisal stage. The cost-benefit analysis in the PAD estimated that all three sub-components are highly cost-effective relative to other internationally investigated health sector investment options. Gains in life years were expected to result from improved and expanded policy environment and multi-sectoral cooperation; improved management and quality of MCH services and blood transfusion services; improved family and community participation in health education; improved interventions and support on HIV/AIDS/STDs and etc.

It was estimated that the MCH components would save a DALY for about RMB 20; the HIV/AIDS/STDs component would save a DALY between RMB 164 and RMB 139 and the blood transfusion service subcomponent would spend RMB 181 for per DALY saved on a 10 year estimation.

This annex will not attempt to replicate the original economic analysis. There are a number of reasons for this decision. First, in a fast evolving country like China, the context and environment that the project has been implemented in has changed substantially. Given these changes, and given the proliferation of related support and interventions (supported by government or other partners), it is virtually impossible to identify the specific contribution of the project to the outcomes of interest. Hence, although the project areas have seen substantial improvements in maternal and child health, in blood safety, and in the coverage of HIV/AIDS and STD prevention and control activities, these improvements are at least in part the result of significant economic growth; improved infrastructure for communities; increased government financing of public health; including MCH and HIV/AIDS; and new programs and policies (e.g. — the Medical Assistance (MA) scheme and New Cooperative Medical Service (NCMS) that have provide health safety net for the rural residence and the poor; the Reduction and Elimination (R&E) program for MCH component, the new Statute on HIV Prevention and Control for HIV component, improved blood management due to the new National Debt Program).

Second, the project was not merely designed to fund a range of cost-effective interventions with measureable health impacts in project areas, but also to strengthen capacity and leadership of government officials and operational staff in the areas of MCH, safe blood, and HIV/AIDS and STD prevention and control. These broader impacts are difficult to measure and quantify, but are nonetheless important in considering the merits of the project. Moreover, they may contribute to improvements in outcomes in non-project areas, hence further complicating the assessment of project contributions.

Third, there is a lack of the reliable data to underpin a systematic assessment of project impact. For example, the project baseline survey covered only project areas. There are no alternative data sources for non-project areas that could be used to evaluate project impacts (and even if such data were available, most non-project areas will have seen

alternative interventions during the 8 years of the project) Moreover, there is limited research on the costs and benefits of MCH and HIV/ AIDS interventions in China that could be used as the references.

Notwithstanding these limitations, the reports and studies prepared in connection with the project completion provide indication of the benefits that have resulted from the project.

MCH

- Significant improvement of the key MCH indicators has been achieved during the period of project implementation (see table below). For example, Maternal Mortality Rate (MMR) dropped 71.7% from 159/100,000 at baseline to 45.1/100,000 in 2007. Compared with non-project counties with the implementation of the same government MCH programs, the average rate of decline of MMR is 8.9% in HIX project counties, higher than the rate of 7.6% in non-project counties. Infant mortality rate (IMR) in the project counties dropped 81.6% from 67.9‰ in 1997 to 12.5‰ in 2007. The annual rate of decline is 8.5%, higher than the rate of 7.3% in non-project counties.

Indicators	1997	2007	% Dropped
MMR(1/100,000)	159.3	45.1	71.7
IMR (‰)	67.9	12.5	81.6
U5MR(‰)	80.7	15.9	80.3
Neonatal Mortality	39.8	8.2	79.4

Note: 1. Data for year 1997 is based on the baseline survey, data for year 2007 is from regular reporting system

- The final independent evaluation found higher MCH service utilization by the project counties compared with non-project counties. For example, hospital delivery rate increased 67% from 48.5% in 1999 to 81.0% in 2006, the national hospital delivery rate at the same period only increased 38%.
- The medical costs for MCH-related services were reduced for the poor families duo to the Medical financial assistance program introduced in the project areas.
- The service delivery capacity was substantially enhanced through project interventions such as intensive training, introduction of new technology, new programs and new procedures. A significant improvement of management capacity for MCH services at all levels was also indicated by the final independent evaluation.

HIV/AIDS and STD

- There are indications that HIV prevalence and incidence were better controlled in the project areas. For example, HIV prevalence increased at a slower rate for project than for non-project areas, particularly after 2004 when nonproject areas

saw a spike. Incidence rate also increased slowly in project than non-project areas. These were achieved on the basis that the control counties started with a much lower baseline (only four cases compared to 1,897).

- Three rounds of behavioral surveillance data show statistically significant improvements in reduction of risky and adoption of safer behaviors by CSWs, IDUs, and young students (except for condom use by young students in most recent sex, for which there was no change). This suggests that project focus on specific groups at risk was successfully achieved.

Safe blood

- Blood laws were legislated and implemented. No shortfalls in meeting requests for blood have been reported.
- Blood management objectives were all reached. Voluntary blood contribution increased from 5 percent to over 96 percent; planned donation⁶ decreased from 81.2 percent to less than 5.2 percent; clinical component blood transfusion increased from 16.5 percent to over 91.7 percent; All project provinces except Guangxi achieved 100 percent VUBD. Shanxi now has one of the best blood safety programs in the country, with very high rates of 400 milliliter donations, repeated donations, and donations from the rural population.
- HIV, syphilis, Hepatitis B Virus (HBV), Hepatitis C Virus (HCV), and Alanine Aminotransferase (ALT) positive rates were consistently detected and small. There were no reports of HIV, Hepatitis B, or Hepatitis C transmission through transfusion in any project county.

⁶ It is a form of unpaid blood donation organized by any working units that are assigned with quota for blood donation. Incentives such as vacations, etc are provided to the donors by their employers. Such a practice of blood donation was prevalent in 1990s, and has been gradually replaced by unpaid voluntary blood donation.

Annex 4. Bank Lending and Implementation Support/Supervision Processes

(a) Task Team members

Names	Title	Unit	Responsibility/ Specialty
Lending			
Jagadish Upadhyay	Task Team Leader	EASHD	
Darren Dorkin	Operations Officer	EASHD	
Hongwen Zhao	Health Operations Officer	EASHD	
Wang Shiyong	Sr. Health Specialist	EASHD	
Lansong Zhang	Operations Analyst	EASHD	
Supervision/ICR			
Teresa Ho	Task Manager	EASHD	
Magnus Lindelow	Task Team Leader	EASHD	
Shiyong Wang	Sr Health Specialist	EASHD	
Shuo Zhang	Health Operations Officer	EASHD	
Mary Eming Young	Lead Specialist	HDNCY	
Xiaowei Guo	Sr. Procurement Spec.	EAPCO	
Haixia Li	Sr. Financial Management Specialist	EAPCO	
Lansong Zhang	Operations Analyst	EASHD	
Sabrina Terry	Program Assistant	EASHD	

(b) Staff Time and Cost

Stage of Project Cycle	Staff Time and Cost (Bank Budget Only)	
	No. of staff weeks	US\$ Thousands (including travel and consultant costs)
Lending		
FY97		1.34
FY98		120.88
FY99		259.45
FY00		15.13
FY01		0.00
FY02		0.00
FY03		0.12
FY04		0.00
FY05		0.00
FY06		0.00
FY07		0.00
Total:		396.92
Supervision/ICR		
FY97		0.00
FY98		0.00

FY99		5.07
FY00		124.77
FY01		92.42
FY02		100.39
FY03		99.23
FY04		179.61
FY05		76.76
FY06		89.56
FY07		29.41
Total:		797.22

Annex 5. Beneficiary Survey Results

(if any)

No beneficiary survey was undertaken for the ICR.

Annex 6. Stakeholder Workshop Report and Results

(if any)

Not applicable.

Annex 7. Summary of Borrower's ICR and/or Comments on Draft ICR

Borrower's comments are unedited.

Completion Report of Health Nine Project

Foreign Loan Office, MOH
(November 11, 2008, Beijing)

Health IX Project is consisted of two components: Maternal and Children Health and HIV/AIDS/STD Prevention and control. Financial input from the World Bank is equivalent to USD 60 millions (USD 35 millions for MCH part, USD 25 millions for HIV/AIDS/STD Part) with planned counterpart funds of RMB 258 millions (RMB 158 millions for MCH part, RMB 110 millions for HIV/AIDS/STD Part) from GOC. The project preparation started in December, 1997. The credit/loan agreement was signed in July, 1999 and the project was formally launched in November, 1999. Through unremitting efforts and harmonious cooperation between the Bank and the borrowers, Health IX Project was successfully completed in June 30, 2008 after a 2-year extension.

1. Maternal and Child Healthcare (MCH) component

1.1. Overview

The MCH component of Health IX Project covers 107 counties in Hunan, Hainan, Jilin, Guizhou and Xinjiang provinces (or autonomous region) with 53 millions population benefiting from it. The minority groups account for 20%. The objective is to enhance capacity of primary MCH service and management; to improve maternal health; to promote psychological and physical development of Children; and to reduce Maternal mortality, infant mortality rate and to increase the Under 5 children nutritional surveillance rate. The project includes 6 components of (1) comprehensive healthcare management for pregnant women and children, (2) family and community involvement and health education, (3) MCH service management and management information system, (4) health professionals training, (5) Medical Financial Assistant (MFA) for pregnant women and children living in poor families; and (6) supporting activities at central level.

1.2. Project achievements

1.2.1. Improving health status and healthcare for project target population

The analysis of core MCH monitoring indicators shows that Health IX has reached its goals, i.e. to reduce MMR, U5MR and Moderate and Severe Malnutrition Rate of U5 Children. (1) The MMR declined 56%, from 159.3/10000 in 1997 to 45.1/10000 in 2007. The U5MR (‰) also dropped from 80.7 to 15.9, IMR (‰) dropped from 67.9 to 12.5, NMR (‰) dropped from 39.8 to 8.2. (2) The disparity of MMR between Health IX project areas and nation-wide rural areas reduced gradually year by year. After taking out the confounding impact of government's Two Reduction Project's, Health IX project still contributes to the drop of MMR and IMR's in the project areas. (3) Moderate and Severe

Malnutrition Rate of U5 Children reduced from 5.2 % in the beginning period of this project to 3.1 % in 2007.

1.2.2. Enhancing delivery of MCH services

In total, Health IX Project financed 263 civil works projects, purchased over 70 thousands pieces of equipment, provided 1 million of short-term training programs and long term training for 10,000 clinical professionals. Compared with baseline survey, the MCH service delivery capacity at both the county and township level have improved substantially in the Project areas.

Through the implementation of the Health IX, the capacity of maternal health services, screening of high risk pregnant women, first aid & referral and primary children healthcare had been improved. Maternal death review had been implemented broadly. Comprehensive management capacity for children diseases had been promoted. Early Children Development had been initiated.

1.2.3 Improving MCH services utilization and equity

Comparing with the beginning of the project, the MCH service utilization, including out-patient, emergency, inpatient, supporting medical examination and referral, in the project areas had significantly increased after the implementation of health education and Medical Financial Assistance program. Health promotion activities supported by Health IX project had played an important role in raising the Knowledge Rate of MCH Core Information and changing the behavior of the targeted population.

MFA program had increased MCH services utilization of poor women and children and improved MCH services equity through conducting. All the MFA funding came from government counterpart funds at different levels. The services covered by MFA program include maternal health care, child healthcare, normal hospital-based delivery, hospital-based delivery for high-risk pregnant women, obstetrical emergency, and out-patient and in-patient medical services for the poor children. By the end of 2007, 200 thousand poor pregnant women and 500 thousand children under 5 years old from poor families have received subsidies for their MCH services in 5 project provinces.

1.2.4 Improving the management capacity of MCH services

The management capacity of MCH services in project areas had been improved through training and other project activities. Advocacy and policy development on MCH service in project areas had been advanced, which has led to more attention and support being paid to MCH works by government leaders. Multiple-sectoral cooperation was also promoted, there was more budget support on MCH services. The management capacity on MCH's service, such as planning and programming, organization and implementation, evaluation and dissemination, routine management of project, have all been improved.

1.3. Lessons and Experiences

1.3.1 Governments' commitment and multiple-sector coordination are the important prerequisites for the project

Chinese government's policy initiatives on MCH services has ensured the government supports from all levels and enabled multiple-sector participation. These had created the important environment for the implementation of the MCH component of Health IX Project. The project implementation has significantly raised the government's awareness and attentions on MCH, which has in turn secured the provision of counterpart funding for the project.

1.3.2 Appropriate design and implementation strategy ensured the impact of project

In the design stage of the project, MCH-related policies and successful experiences from other projects implemented in China were fully considered. The baseline survey was very helpful in identifying project priorities and deciding on resource allocation. All project components designed and implemented under H IX project were adapted to the MCH needs in the poor rural areas at that time, covered most of the primary MCH work and provided an entire working philosophy. During project implementation, all project areas developed their implementation plans with consideration of local situation. This way made the project more operational and assured the outcomes of the project.

1.3.3 Effective project management ensured the smooth implementation of the project

Smooth implementation depends on organization and management, planning and coordination, supervision and guidance and other mechanism. The joint supervisions of Ministry of Health and the World Bank, and the routine project supervision at both central level and provincial level were important for ensuring project progress and implementation of the project activities. Based on the project progress and local needs, Health IX Project amended the fund reallocation and implementation plan twice during the whole project life, this has played an imperative role in smoothly implementing the project and realizing the project goals.

1.3.4 Learning from each other and mutual supports between Health IX Project and other projects laid a foundation for sustainable development of Health IX project (MCH part)

Health IX project has relatively long implementation period and involves a broad range of MCH services. During the implementation, some other MCH projects were launched, for example the Two Reduction Project. Health IX project has coordinated with other MCH projects, sharing the information, knowledge and experiences. Health IX project (MCH part) provided useful methods and experiences in MCH professionals training, project management, MFA managerial model and etc while the implementation of other projects had also contributed to the achievement of the project objectives of Health IX project. The cooperation has also laid a solid foundation for the sustainable development of the project.

1.3.5 Technical support of expert panels and many professional protocols ensure quality of project implementation

Expert panels at central, provincial, municipal, and county levels were established and played an important role in providing technical support for project implementation. Routine technical supervisions played irreplaceable role in improving MCH services and

enhancing MCH management. In order to improve the quality of the MCH services, all project provinces developed and updated the MCH service regulations and clinic protocols. The expert panels promoted the implementation of those regulations and protocols in the MCH service facilities at all levels. The project activities following those regulations and criteria not only met Project's objective of improving MCH services quality at grassroots' level, but also laid a foundation for the sustainable development of MCH services in the project areas.

1.4. Issues and recommendations

In addition to provide funding and financing equipment, civil works and professional training, Health IX Project has also introduced new concepts on MCH services and management. Some thinking and recommendations were summarized as follows on the basis of experiences and lessons gained in project implementation. These may be useful in the development and implementation of MCH policies in the future.

1.4.1 To obtain government attention and support is the organizational guarantee for promoting MCH work

Owing to poor economic conditions in most of project areas, the gained MCH achievement will not sustain if there is no continued policy support and financial input. The government's attention is the most important factor in the MCH work. Emphasis should put on leadership mobilization and policy development, and the government's responsibilities in MCH work should be reinforced. The government should increase financial input on MCH work, especially to include MCH service at village level into the public health package, this will provide a institutional guarantee for the MCH work at local level. Meanwhile, multiple-sectors cooperation should be strengthened in order to improve environment of MCH services and to rationally allocate resources in more broad scope.

1.4.2 There is still long way to go to improve the MCH services capability at root level and establishing rational management mechanism

The MCH working situation in rural areas, especially in poor areas, is yet to be improved. To develop MCH services capability and management mechanism should be a long term priority. In addition to provide the necessary equipment, the systematic training of MCH professionals at root level should be continued, the implementing of regulations on professional qualification, certifications and licensing should be strictly enforced, other important works include: gradually improve the working condition of the MCH staffs, intensify the MCH services management regulations and operation mechanism at root level, develop MCH management protocol, establish performance evaluation criteria for MCH facilities in different areas.

1.4.3 Integrated management of different projects may produce greater benefits

The practice of Health IX Project (MCH part) shows that mutual support among different MCH projects can produce more social and economic benefits. During the implementation of the Health IX project, a few new MCH projects have been introduced in the Health IX project areas. The experiences shows that more benefits in terms of capacity building, personnel training, MFA, technical support, health promotion and

others could be achieved by fully utilizing and integrating different project resources.

1.4.4 There should be a long –term medical assistance program to ensure the equity of MCH services

MFA program of Health IX Project achieved social benefits by making primary MCH services available for poor pregnant women and children from poor families. In order to keep the equity of utilizing primary MCH services, it suggests that more practical MFA scheme should be studied; MFA for poor women and children should be integrated into overall poverty reduction scheme or into government's medical assistance program.

2. HIV/AIDS/STI Part

1.1. Overview

The budget of Health IX project (HIV/AIDS/STI part) is USD 39.99 million (USD 25 million accounting for 62.5% of the total from the World Bank and other USD 14.99 million accounting for 37.5% as counterpart funds from all level of governments). The project comprised six sub-components, i.e. (1) policy development and institutional building, (2) HIV/AIDS/STD surveillance, (3) HIV/AIDS/STD interventions, (4) blood safety management, (5) the national-level supporting program, and (6) non-government organization (NGO) involvement. The NGO component had received financial supports from three international grants (AUD 2 million from AusAID of Australia, a total number of USD 1.06 million from JSDF, Government of Japan, in two batches). The project implemented Fujian, Shanxi, Guangxi and Xinjiang in provinces/autonomous regions covers 55 counties in 35 prefectures with a population of 126 millions that accounts for 74.5% of the total population in the four provinces/autonomous regions.

2.2. Achievements

With continuous efforts during near ten-years, all project activities planned in six components had been conducted in a comprehensive way. The project development objectives have been met. For some of them, the project even has performed better than the originally planned. Being the first large-scale HIV/AIDS/STD project in China, Health IX Project (HIV/AIDS/STI Part) took the lead in implementing a large number of innovative programs and approaches and obtained valuable experiences.

2.2.1. Key HIV/AIDS/STD policies and technical guidelines developed

With the support from the Project, Mid and Long-term Plan for Prevention and Control of HIV/AIDS (1998-2010) and Action Plans for the Control and Prevention of HIV/AIDS (2001-2005) for the country and particularly four project provinces/ autonomous regions had been developed, issued and implemented. More than 30 national HIV/AIDS/STD technical regulations and guidelines were developed and in effectiveness. As many as 544 specific HIV/AIDS/STD policies were issued and implemented at provincial, prefecture and county level. They account for 90.2% of all HIV/AIDS/STD policies issued in the corresponding period. Government in many project prefectures and counties has greatly improved their HIV/AIDS/STD working mechanisms including key leaders are hold accountable for the local HIV/AIDS prevention and control, multi-sectoral participation, regular meetings by the local leading group members, and clearly assigned

responsibilities for all the relevant sectors. By supporting the national expert panel to participate in policy development and innovative intervention pilot programs, the project contributed to establishing a supportive HIV/AIDS/STD policy environment especially for condom promotion, needle exchange and methadone maintenance among intravenous drug users.

2.2.2. Improved Capacity for HIV/AIDS/STD response in the project areas

Through various training workshops on different technical areas and the practices organized under the project, a large number of HIV/AIDS/STD professionals at national, provincial, prefecture and county levels have been trained to become backbones on surveillance, HIV testing, HIV surveillance, HIV VCT, intervention among HRGs, blood safety, etc. It forms the base for the further HIV/AIDS/STD activities to be sustained. Middle-term and final evaluation showed that test scores of HIV/AIDS/STD knowledge and attitudes among trained professionals were better in project prefectures than the control ones. The similar results were observed among government leaders surveyed. At the end of 2007, Real-Time-Data-Analysis of 'Proportion of Surveyed HIV/AIDS Cases Out of All Reported Cases' conducted by National HIV/AIDS/STD Center, China CDC indicated that project prefectures have reached a higher proportion of HIV/AIDS cases than that in non-project prefectures in the same project provinces/autonomous regions.

2.2.3. HIV/AIDS Surveillance and Testing Network Strengthened At National And Prefecture Level

Health Nine Project supported a large amount of equipment for the National HIV Reference Laboratory (NARL). With new equipments, the lab set up diagnostic serum bank, nucleic acid sample bank, cell bank, virus strains bank and genetic sequence bank. The P3-level Lab was improved. Increased capacity of the NARL in HIV serologic testing, etiology and nucleic acid testing was critical in providing testing solutions for difficult samples and responding to HIV emergency events.

The four project provinces/autonomous regions have set up 146 HIV sentinel surveillance sites during the project implementation. In addition, the number of HIV testing laboratory members grew from more than 110 in 1999 to 863 in 2007. Health IX Project (HIV/AIDS/STI Part) was the first project to launch HIV behavioral surveillance which was conducted in four project provinces/autonomous regions. Useful information was generated to inform development, implementation and assessment of interventions and also be used as baseline data for final evaluation of Health 9. By implementing behavioral surveillance programs, HIV surveillance capacity in project prefectures and counties was improved. HIV/AIDS case reporting and sentinel surveillance in project prefectures and counties was also improved. The number of HIV tests and surveillance samples increased rapidly every year. The HIV surveillance system in the project provinces/autonomous regions contributed to identification of 30,814 HIV/AIDS cases.

2.2.4. HIV/AIDS/STD Interventions Implemented In Project Prefectures and Counties

Since 2000, most of effective HIV/AIDS/STD interventions including outreach services in entertainment places (Karaoke, Sauna, street restaurant/hotel, hair-parlor), condom

promotion (entertainment places, hotels, vendor machines and advocacy for policy development), standardized STD management (standardized STD services, STD case management, health education and counseling), public campaign through mass media (TV, broadcast, newspaper, magazine, advertisements, counseling or distributing leaflets in the streets), peer education (among young students, drug users, miners, MSMs), needle social marketing, methadone maintenance treatment, voluntary counseling and testing, training for medical staff, community-based interventions and interventions to reduce mother-to-child transmission, have been implemented in the project prefectures and counties. Based on information on local HIV/AIDS/STD epidemic, each project prefecture or county launched intervention programs or awareness campaigns targeting different populations such as female sex workers at entertainment establishments, intravenously injecting drug users, MSM, STD patients, long-distance truck drivers, coal miners, construction workers, young students, medical professionals, women and general population.

2.2.5. NGOs Involvement In HIV/AIDS/STD Prevention and Control

Different NGOs at national and project prefecture/county level, including Trade Union, Women Union, Youth League, Family Planning Association, Red Cross, HIV/AIDS/STD Prevention and Control Association, HIV/AIDS network, Islamic religion groups and MSM community-based groups, were mobilized and involved into HIV/AIDS/STD prevention and control. The project provided training for NGO workers on HIV/AIDS knowledge, project management, intervention technologies and skills. Supported by the project grants, NGOs implemented 52 HIV/AIDS/STD intervention programs targeting mobile population, female sex workers at entertainment places, drug users and their family, PLWHA and others. The intervention approaches or strategies included peer education, community care, condom promotion, harm reduction and mass media campaign. Health IX was the first large scale project in China provided systematic training and grant supporting to enable NGOs' participation in HIV/AIDS prevention and control.

2.2.6. Voluntary Blood Donation Being Promoted and Blood Management Being improved

With the project's support, 75 blood donation sites were set up in Xinjiang, Fujian, Shanxi and Guangxi provinces/autonomous regions. All blood stations have developed standardized operation procedures and put them into practice. All staff of blood stations has undergone professional certificate trainings and examinations (90% of staff passed the exam). The volume of voluntarily donated blood doubled at the end of the project when compared to the beginning. Proportion of voluntary donation increased from 5.0% to more than 96% while planned blood donation dropped from 81.2% to less than 5.2%. Proportion of blood component transfusion in medical facilities increased from 16.5% to 91.7%. It contributes significantly to prevention of transmission of HIV, syphilis, and other blood borne infections. In the late stage of the project, indicators showed that blood safety maintained at a high level with 0.3% for anti-HIV positive rate, less than 1% for syphilis positive rate, less than 1.5% for HBV positive rate, less than 0.8 for anti-HCV positive rate and less than 3.6% for ALT abnormality rate.

2.2.7. Gained Valuable Experiences in Managing HIV/AIDS/STD Project

The project sets up a good model of project management and learned experiences for similar projects implemented later. It was demonstrated that the project organization framework consisting of government leaders, project management officers and technical experts at national, provincial, prefectural and county level could address very well the three main challenges rising from the project implementation. These challenges included difficult to mobilize different sectors and coordinate their activities, complicated intervention technologies and enormous activities to be conducted. In addition, international and national consultants, experts and officers jointly and repeatedly followed the strategy to design project plan, i.e. 'discussion and consultancy-field visit-revising plan'. In this way, the project plan could be specific to the HIV/AIDS/STD epidemic, reflect priorities of overall response and contain reasonable project activities in various fields. The development process of annual plan described above, first 'from top to bottom' and then 'from bottom to top', would help project staff at both national and local level to use their advantages for the planning. Moreover, problems or issues with project implementation could be identified at early stage and addressed properly with regular project reporting, regular international and national supervisions, and systematically designed and conducted middle-term and final project assessment. The regular project reporting was required and consistently checked. Every supervision mission was planned beforehand and debriefed afterwards.

2.2.8. Significant Achievements In HIV/AIDS/STD Prevention And Control

Final evaluation showed that knowledge, attitudes and behaviors among general and key high-risk populations improved significantly. The before and after self comparison showed that awareness rate of HIV prevention knowledge among general population rose from 3.1% at middle-term to 17.4% at the end of the project. Condom use at last sex intercourse rose from 19.8% to 30.1% among general population. When compared with non-project prefectures/counties, awareness rate of HIV prevention knowledge rose from 0.8% at middle term to 3.8% at final stage. Condom use at last sex intercourse rose from 11.4% to 25.6%. More importantly, with the expansion of interventions, the overall STD prevalence seemed to decline gradually in project prefectures/counties, which was significant different when compared with that in non-project prefectures/counties. The prevalence of five STDs, gonorrhea, syphilis, Chlamydia trachomatis, genital warts among FSWs in project prefectures/counties was much lower than that in control ones (15.4% vs. 25.0%). The difference is statistically significant. HIV prevalence among drug users in project prefectures/counties declined from 36.6% in 1999 to 20.8% in 2006.

2.2.9. Models Of HIV/AIDS/STD Prevention and Control

When Health IX Project benefited non-project prefectures/counties. HIV/AIDS/STD technical guidelines which were developed under the project were issued to non-project prefectures or counties. Staffs from non-project prefectures or counties were also invited to attend trainings sponsored by the project. It was common that swap of managerial and technical staff between project and non-project prefectures. Experiences, knowledge and skills learnt from the project were introduced to the non-project prefectures. Mobile population, long-distance drivers and female sex workers who received intervention

services in project prefectures/counties could affect their new peer fellows after they moved to non-project prefectures/counties. The project implemented a series of successful intervention models and enriched the best practice collection of HIV/AIDS/STD prevention and control in China. These interventions could be used as reference for future intervention programs targeting female sex workers, intravenous drug users, youth/students and for standardized STD management program.

2.2.10. The achievements of the Project Would be Sustained

The project helped to establish and strengthen leadership for HIV/AIDS/STD prevention and control, develop and issue a series of HIV/AIDS/STD policies and guidelines, create a supportive environment with reduced fear, stigma and discrimination against PLWHA, and increased participation from NGOs and other sectors, improve the commitment from the government. All these positive changes have set up a platform for future HIV/AIDS/STD programs to build upon.

The project has trained a large number of managerial and technical staff that have been the backbones of the HIV/AIDS/STD programs in project prefectures/counties. Besides, equipments supported by the project for blood stations, HIV testing labs and intervention teams will continue to be used after the project closure.

HIV behavioral surveillance guideline and sentinel surveillance sites developed or established under the project have become an important part of national HIV surveillance systems. In addition, a series of effective intervention models, technical regulations and guidelines which have been developed with project efforts can be good references for future HIV/AIDS/STD programs.

Finally, successful implementation of intervention activities under the Project will surely be a plus for the project provinces and prefectures to apply for more project funds from the government or other resources.

2.3. Experience and Lessons learnt

Within the last ten years, about more than two thousand managerial staff and hundreds of thousands technical staff from different fields had been involved in the project to conduct a large number of innovative HIV/AIDS/STD activities with enormous efforts. Quite a lot of valuable experiences have been learnt during this process which can be shared with or taken as references for other projects.

2.3.1. Establishing Long-Term Mechanism For Involvement Of Related Government Sectors

HIV/STD prevention and control is a long term endeavour which can not be successful without government support and overall involvement. The experience in Yizhou Guangxi provides useful lesson on how to maintain sustainable multisectoral participation. The local government in Yizhou set up a leading groups consisting of key leaders of all related sectors at city and township level, but also signed letter of responsibility for HIV/AIDS/STD prevention and control with all related sectors and township governments. In the agreement, items about responsibilities, working tasks,

goals and objectives and reward and punishment were clearly stated. Evaluation was conducted regularly against the agreements and incentives or punishment would be exercised according to the evaluation results.

2.3.2. Taping NGOs' Advantages and Promotion of Innovations

NGO's HIV/AIDS/STD program can be carefully tailor made for any target population. Three most important highlights of the NGO initiatives under the Health IX project include (a) capacity building for NGOs with a combination of training and practicing through grant support, (b) involving self-organized NGOs or community based groups; (c) government's willingness to involving NGOs including CBOs in HIV/AIDS prevention and control .

2.3.3. Mobilizing Medical Professionals To Participate For HIV/AIDS/STD Prevention And Control

Medical professionals get easy access to the target populations (including HIV/AIDS patients and high-risk groups) and trusted by them. Health IX Project is the one of the project that bridged two programs respectively focusing on HIV/AIDS and STI. It channeled a large amount of resources into promotion of standardized STD management, training STD clinicians and encouraging them to participate in STD treatment and prevention.

2.2.4. Development and implementation of Intervention Guidelines and Operational Procedures

With the project's support, a series of intervention guidelines and operational procedures were developed. Following these guidelines and procedures has not only ensured key intervention strategies and measures implemented by reducing potential difficulties and increasing practicality.

2.3.5. Promotion of Evidence-Based Decision-Making and Design of Intervention

Three rounds of behavioral surveillance, eleven operational researches and quite a few surveillance and evaluation training workshops were carried out. The following ideas or concepts were repeatedly stressed and promoted: development and selection of HIV/AIDS/STD intervention must be based on relevant data collected and analyzed; program outcomes or impacts have to be the focus of the project.

2.3.6. Project Supervisions

Health IX Project (HIV/AIDS/STI Part) has organized different forms of supervision. Project supervisions contribute to (a) improved awareness among related government sectors; (b) improved understanding of project progress and existing problems; (3) strengthening communication among the World Bank, Ministry of Health, project provinces/autonomous regions and experts panel; (4) solving key problems hindering project implementation.

2.3.7. The Roles Of Expert Panels

Health IX (HIV/AIDS/STI Part) set up various national expert panels by project component, i.e. surveillance, intervention, STD management, blood management and

NGO's involvement. The national expert panels maintained stable during the project implementation. Different forms of incentives such as study tours, sponsoring operational research, consultant fee were employed. The panels took the lead in developing central and local intervention plans, developing technical guidelines, preparing supervision reports, as well as providing input to other project activities.

2.4. Issues And Recommendations

During the ten years' implementation of Health IX (HIV/AIDS/STI Part), the Country has undergone dramatic changes in its political, economical, cultural context. It has been challenging for the project to catch up with all the changes that surely have impacts on the project implementation.

2.4.1. Coverage and Frequency Of Interventions Needs To Be Expanded And Increased

Many interventions targeting at high-risk groups (such as MSMs, CSWs, IDUs) remain pilots with limited coverage. The project needs to its experiences learnt and effective intervention piloted for other projects to take over so that intervention coverage can be expanded and sustained. In addition, the frequency of any intervention among HRGs should be maintained.

2.4.2. Comprehensive Interventions Need To Be Implemented

Integration of different interventions is essential for HIV/AIDS/STD prevention and control. Development of intervention strategy must take into account features of target groups and transmission routes. Operational guidelines for integrated HIV/AIDS/STD prevention and control should be developed. This will help to integrate various interventions to avoid overlapping and achieving greater synergy.

2.4.3. Coordination Among Government Sectors Needs To Be Further Strengthened

Although coordination among different government sectors has been improved significantly, there is still a room for improve coordination among them in some prefectures/counties. Responsibilities of each government sector needs to be clarified, the local HIV/AIDS/STD leading groups should be fully functioning.

2.4.4. Role Of NGO Needs To Be Further Strengthened

NGOs have their own strengths in access to and provision of services to the needed such as high-risk, vulnerable and marginalized populations. NGOs component of Health IX (HIV/AIDS/STI Part) has been instrumental in creation of supportive environment and capacity building for NGOs' involvement in HIV/AIDS/STD interventions. It is important to mobilize various resources to sustain the ongoing NGO initiatives under the Health IX Project.

2.4.5. To Further Improve HIV/AIDS/STD Surveillance And HIV Testing Lab Network

Quality of reporting and analysis of HIV surveillance data needs to be improved. In addition to the reports generarted from three rounds of behavioral surveillance surveys, best practices and experiences learned should be documented and compiled. HIV

laboratory network needs to improve its quality control, and coordination among member institutions.

2.4.6. To Strengthen Project Management

Good project management is essential to quality project implementation which in turn is critical to achieving the project objectives. To strengthen project management (planning, financing and M&E activities), it is important to make sure stability of project management teams at different levels, training for managerial staff and establishment of appropriate incentive mechanism. In addition, communication between different project sectors or divisions and timely reporting of project progress to the officials at higher levels and feedback to low levels should be strengthened.

2.4.7. To Strengthen Communication and Cooperation Between Various Technical Sections

HIV/AIDS/STD program involves various technical sections and disciplines including surveillance, intervention, STD management, blood safety management, and policy development. These sections and disciplines involved need to strengthen communication among them and share information effectively to achieve better synergy and greater impact on curbing the local HIV/AIDS epidemics.

2.4.8. Dissemination of the Project's Achievements, and Promotion of Experience-sharing

Experiences learnt, best practices established and results of operational researches need to be actively promoted and shared with others in order to generate greater impacts. In so doing, the project achievements under the HIV/AIDS/STD component can be sustained after the Project is completed.

Annex 8. Comments of Cofinanciers and Other Partners/Stakeholders

Not applicable.

Annex 9. List of Supporting Documents

Development Credit Agreement (Health IX Project) between People's Republic of China and International Development Association, (July 29, 1999).

Foreign Loan Office (2008) Assessment on Medical Financial Assistance (MFA) for Women and Children in Poverty Households, the MFA Assessment Group for MCH of Health IX Project, (April 2008).

Foreign Loan Office (Department of Medical Administration and Department of Disease Control), Ministry of Health (China). Project Implementation Plan for HIV/AIDS/STD Prevention and Control Component of the Health IX Project Funded by the World Bank Loan, (October 1999).

Foreign Loan Office (2008) Endpoint Evaluation Report, Health Nine HIV/STI Prevention and Control Subproject, Foreign Loan Office, Ministry of Health, H9-HIV/STI Endpoint Evaluation Team, (May 2008).

Foreign Loan Office (2008), Implementation and Effect Evaluation of Early Child Development, Evaluation Group for Early Child Development, (February 2008).

Foreign Loan Office of MOH, National Expert Panel of MCH Component, Health Nine. Project Final Summary Report MCH Component, Health IX Project, (May 2008)

Foreign Loan Office (PHC and MCH Department), Ministry of Health (China). Project Implementation Plan for MCH Subproject of Health IX Project Funded by the World Bank, (April 15, 1999).

Foreign Loan Office (2008), The Report on Effect Evaluation of Health Education. The Component of Maternal Health and Child Development in the Project of Health IX, The Workgroup for Effect Evaluation Group of Health Education, (March 2008).

International Bank for Reconstruction and Development, and International Finance Corporation and Multilateral Investment Guarantee Agency (2006). Country Partnership Strategy for the People's Republic of China for the Period 2006–2010, (May 23, 2006).

International Bank for Reconstruction and Development. Letter to Mr. Jin Liqun, Vice Minister of Finance of the Ministry of Finance regarding the Australian Grant for HIV/STD Prevention and Control, Grant Number TF23612 (June 13, 2000)..

International Bank for Reconstruction and Development. Letter to Mr Zhu Guangyao, Director General of the International Department of the Ministry of Finance regarding the Japanese Grant for Health Nine Project/NGO Development Project, Grant Number TF026233, (August 8, 2000).

Sichuan University School of Public Health, Peking University School of Public Health and National Center for Women and Children's Health, China CDC. Final Evaluation Report of MCH Component of Health Nine Project Supported by WB, MCH Component of Health Nine Project Final Evaluation Mission, (May 2008).

Whyte, Gordon. Improved Security of Clinical Blood Transfusion in Four Provinces of China 1997–2005, International Education Development Unit Faculty of Medicine, Nursing and Health Sciences, Monash University, Australia.

World Bank, Implementation Status and Results Reports for Investment Projects, China Health IX Project, (03/10/2008, 03/27/08, 04/12/08 and 06/07/08).

World Bank (2006), Implementation Completion and Results Report Guidelines, OPCS, (August 2006).

World Bank (2007), Implementation Completion Report on a Credit in the Amount of SDR 63.0 Million (US\$85 Million Equivalent) to the People's Republic of China for a Basic Health Services Project, Human Development Sector Unit, East Asia and Pacific Region, (December 2007).

World Bank (2005), Implementation Completion Report on a Credit in the Amount of US\$100 Million to the People's Republic of China for a Disease Prevention Project, Human Development Sector Unit, East Asia and Pacific Region, (April 2005).

World Bank (1999), Project Appraisal Document on a Proposed Loan of US\$10.0 Million and a Proposed Credit of SDR 36.8 Million to the People's Republic of China for a Health IX Project, Human Development Sector Unit, east Asia and Pacific Regional Office, (April 14, 1999)

World Bank (1998) Confronting AIDS: Public Priorities in a Global Epidemic: Oxford University Press.

